

SITE BENCHMARKS:

SEE SHEET C-02 FOR BENCHMARK INFORMATION

NOTE:

- CITY OF ST. CHARLES IS TO BE NOTIFIED 3 DAYS PRIOR TO CONSTRUCTION START.
- CITY OF ST. CHARLES SHALL BE INCLUDED IN ALL PRE-CONSTRUCTION MEETINGS.
- ANY KNOWN DISCREPANCIES ON THIS PLAN SET MUST BE BROUGHT TO THE ATTENTION OF CITY OF ST. CHARLES PRIOR TO THE START OF CONSTRUCTION.

Dial 811 or 1-800-892-0123 JULIE DESIGN TICKET NUMBER:# A1861870



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WITH THE FOLLOWING:  
COUNTY KANE COUNTY  
CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP  
SEC. & 1/4 SEC. NO.# 34 & 35-40 N.-8 E.

Two (2) working days before you dig  
(Excluding Sat., Sun. & Holidays)

CLIENT:

CITY OF ST. CHARLES  
KAREN YOUNG, P.E., CFM  
ASSISTANT DIRECTOR OF PUBLIC WORKS - ENGINEERING  
CITY OF ST. CHARLES  
2 E. MAIN STREET  
ST. CHARLES, IL 60174  
PHONE: 630-377-4405

ENGINEER / SURVEYOR:

HR GREEN INC.,  
420 N. FRONT ST.  
McHENRY IL. 60050  
PHONE: (815) 385-1778

JASON WHYTE, P.E., PROJECT ENGINEER II  
PHONE: (815) 759-8366

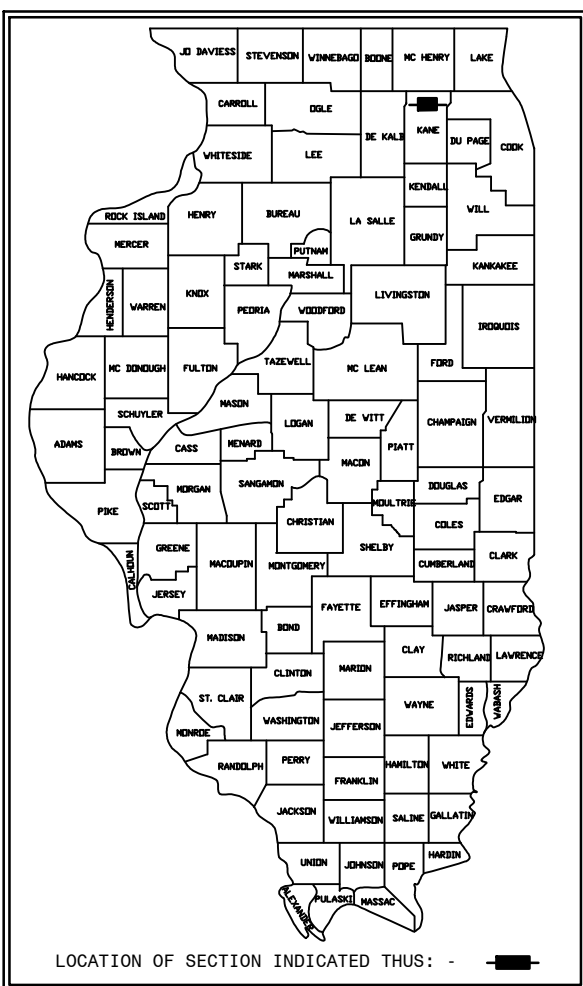
AJAY JAIN, P.E., CFM, - VICE PRESIDENT,  
WATER RESOURCES PRACTICE LEADER  
PHONE: (815) 759-8331

BERNIE BAUER, P.L.S. - PROJECT LAND  
SURVEYOR  
PHONE: (630) 708-5033

RALPH STARK, P.E., CFM,  
ASSOCIATE/LEAD WATER RESOURCE ENGINEER  
PHONE: (815) 759-8357

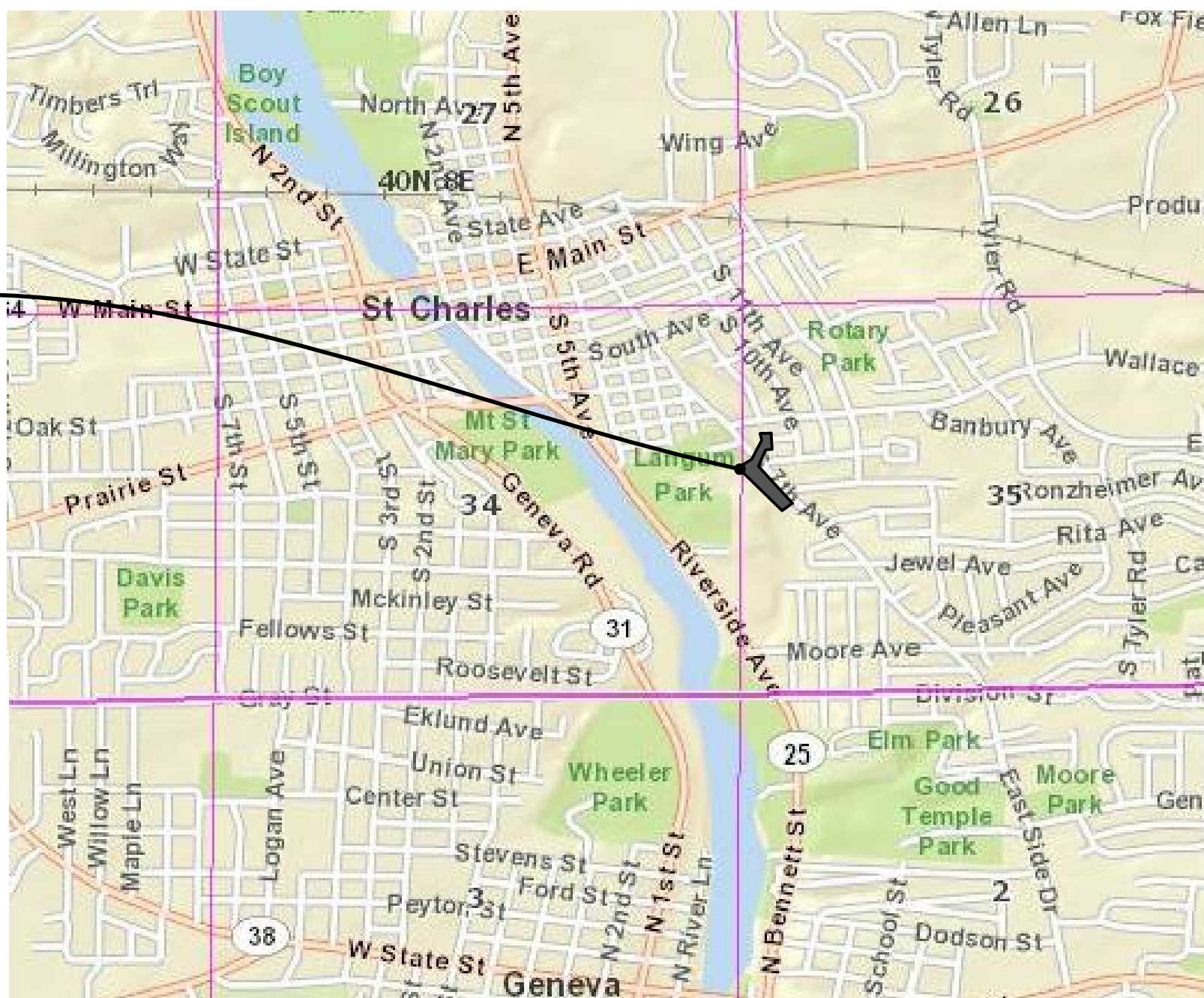
UTILITY CONTACT INFORMATION

J.U.L.I.E.	DESIGN TICKET #A1861870	ILLINOIS JULIE, 800-892-0123
CITY CONTACT/ CITY ENGINEER	CITY OF ST. CHARLES MS. KAREN YOUNG, P.E., CFM ASSISTANT DIRECTOR OF PUBLIC WORKS 2 E. MAIN STREET, ST. CHARLES, IL 60174	630-377-4486
SANITARY/ WATER	PUBLIC WORKS DEPARTMENT PUBLIC WORKS FIELD OFFICE 200 DEVEREAUX WAY ST. CHARLES, IL 60174	630-377-4405
ELECTRICAL POWER	CITY OF ST. CHARLES (ALONG JOHN DEUTSCH DR.) THOMAS BRUHL	630-377-4405
NATURAL GAS	NICOR GAS YVONNE HARRIS NEW BUSINESS COORDINATOR 90 N. FINLEY ROAD GLEN ELLYN, IL 60137	630-317-1684
TELEPHONE	ATT/DISTRIBUTION JANET AHERN 1000 COMMERCE DRIVE, FLOOR 1 OAK BROOK, IL 60523 MM3781@ATT.COM	630-573-5450 630-573-5495
CABLE/ INTERNET	COMCAST MARTHA GIERAS 680 INDUSTRIAL DRIVE ELMHURST, IL 60126	224-229-5862
	WIDE OPEN WEST PAUL FLINKOW 1674 FRONTENAC RD NAPERVILLE, IL 60563I	630-536-3100 630-536-3139
EPA	I.E.P.A. - PERMIT SECTION, DIVISION OF WATER POLLUTION P.O. BOX 19276 SPRINGFIELD, IL 62794-9276	217-782-0610
GEOTECHNICAL AND TESTING	MIDLAND STANDARD ENGINEERING MICHAEL PRIGGE, P.E. 558 PLATE DRIVE EAST DUNDEE, IL 60118	847-844-1895



**PROJECT  
LOCATION**  
7TH AVE. CREEK DRAINAGE  
IMPROVEMENTS AT JOHN  
DEUTSCH CULVERT

LOCATION MAP



CITY OF  
ST. CHARLES

ILLINOIS • SINCE 1834



HRGreen

420 N. FRONT STREET, SUITE 100 | McHENRY, IL 60050

Phone: 815.385.1778 | Toll Free: 800.728.7805 | Fax: 815.385.1781 | HRGreen.com



ILLINOIS DESIGN FIRM # 184-001322  
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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

CIVIL - FINAL ENGINEERING

COVER SHEET

SHEET NO.

C-01

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CERTIFICATION

CIVIL

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Illinois.  Jason M. Whyte, P.E. License Number: 062060462 My license renewal date is 11/30/2019. Pages or sheets covered by this seal: C-01 - C-15, ALT-1, C2-01, C2-02, ALT-2, EC-01 - EC-05, CD-01 - CD-04
	8/01/2018 DATE

STRUCTURAL

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Illinois.  Steven L. Schwarz, S.E. License Number: 081-6011 My license renewal date is 11/30/2018. Pages or sheets covered by this seal: S-01 - S-03
	8/01/2018 DATE

FOR BID  
NOT FOR CONSTRUCTION

DRAWN BY: MPL	JOB DATE: 10/27/2017	BAR IS ONE INCH ON OFFICIAL DRAWINGS: 0" = 1"
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NO.	DATE	BY	REVISION DESCRIPTION



GENERAL NOTES:

1. All items of this project shall be governed by specifications included in the documents listed below:
- A. "Standard Specifications for Road and Bridge Construction" prepared by the Department of Transportation of the State of Illinois and adopted by said department. (Latest Edition).
- B. "Supplemental Specifications and Recurring Special Provisions" adopted by the Illinois Department of Transportation (Latest Edition).
- C. "Bureau of Design & Environment Manual" (BDE) by Illinois Department of Transportation (Latest Edition)
- D. "Manual on Uniform Traffic Control Devices" – Federal Highway Administration MUTCD (Latest Edition).
- E. "Illinois Supplement to the National Manual on Uniform Traffic Control Devices" (Latest Edition).
- F. "Standard Specifications for Water and Sewer Main Construction in Illinois" (Latest Edition).
- G. "Illinois Urban Manual" prepared by the U.S. Department of Agriculture NRCS and maintained by the Association of Illinois Soil and Water Conservation Districts (Latest Edition).
- H. "Standards and Specifications for Soil Erosion and Sediment Control" by IEPA, Illinois Urban Manual – A Technical Manual Designed For Urban Ecosystem Protection and Enhancement, (Latest Edition).
- I. "Kane County Stormwater Management Ordinance"
- J. "City of St. Charles Stormwater Managment Ordinance"
- K. City of St. Charles Design and Inspection Policy Manual.

In addition the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

2. SCOPE OF WORK: The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated as 7TH AVENUE CREEK, DRAINAGE IMPROVEMENTS AT JOHN DEUTSCH CULVERT.

COORDINATION WITH UTILITIES

Prior to the start of construction, the contractor shall have all utilities located by J.U.L.I.E. (811) or (1-800-892-0123) at least 48 hours prior to the start of construction. The contractor shall cooperate with all utility owners as provided for in the Standard Specifications.

The contractor shall be responsible for the protection of all underground or surface utilities, even though they may not be shown on the plans. Any utility that is damaged during construction shall be repaired or replaced to the satisfaction of the Engineer or the Owner. This work shall be paid for at the Contractor's expense.

It is the Contractor's responsibility to locate all existing utilities prior to construction. The location of existing utilities as shown on these plans is based on record information and may not be accurate. Where conflict exists between existing utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the Engineer. The contractor shall report all such conflicts immediately to the Engineer.

All existing utilities within the project area shall be removed and relocated, if necessary, for construction by the utility company which has jurisdiction over it. The Contractor is responsible for scheduling with the appropriate utility company.

Where proposed water main crosses under existing gas main the Contractor shall provide extra care when installing proposed water main to prevent damage to existing gas main.

The coordination of all utility work for the construction project will be discussed at a pre construction meeting.

CONSTRUCTION OF UNDERGROUND UTILITIES

- A. Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used. The slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe. Open-cut trenches shall be sheeted and braced as required by the governing State and Federal laws and municipal ordinances, and as may be necessary to protect life, property, or the work. Where firm foundation is not encountered at the grade established due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.
- B. Width of trench: The maximum width of trench at the top of the pipe shall be as follows: In addition see trench detail on sheet C-27.

Nominal Pipe Sizes (Inches)	Trench Widths (Inches)
12 or smaller	30
14-18	36
20-24	42
27-30	48
33 and larger	1 1/3 times pipe O.D.

- C. Removal of water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water. This shall be incidental to the utility work Unless Noted Otherwise.
- D. Bedding of pipe: All pipe shall be installed on a bed of approved, compacted granular material unless otherwise approved by the City Engineer. Bedding shall be provided for all underground pipelines, except where concrete encasement, concrete cradles, boring or jacking are indicated. Bedding shall be a minimum thickness of four inches and consist of gravel or crushed stone 1/4-inch to one inch in size. As a minimum, the bedding material shall conform to the requirements of the "Standard Specifications for Road and Bridge Construction, Illinois Department of Transportation. The gradations shall conform to gradation CA7, CA8, CA13 or CA13 therein. Note that when PVC or ADS pipe is used, the bedding material shall extend to 12 inches over the top of the pipe. Bedding shall be properly compacted. The bedding and backfilling of excavated materials shall be verified with City first and be installed as per typical trench backfill detail. This shall be incidental to utility work Unless Noted Otherwise.

Wherever two or more pipes or conduits are placed in the same trench or excavated area, backfill the trench with granular bedding material to support the uppermost pipe or conduit.

- E. Trench backfill: Whenever the excavation is within 2' of existing or proposed street, parking areas, driveways, or other paved areas, the trench shall be backfilled with an approved selected granular material (per the City of St. Charles standard detail contained in this plan set), compacted in place. The top 12" of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area. Special backfill shall be per the City of St. Charles standard detail and shall be compacted in place to ninety-five percent (95%) of maximum density at optimum moisture as determined by the Standard Proctor Test. Refer to the City standard trench detail. Note: Excavated materials may be used if approved by the Engineer. To be measured and paid for per Section 208 of the Standard Specifications for Road and Bridge Construction (IDOT).
- F. Restoration of drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practicable.

Adequate temporary drainage facilities meeting the approval of the Engineer shall be provided during construction. This work shall be incidental to the project Unless Noted Otherwise.

- G. Utilities: The Contractor shall notify all utilities owners prior to the installation of any pipe lines. Where conflict exists between underground utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the CITY OF ST. CHARLES and or Engineer in writing.

(GENERAL NOTES CONTINUE ON SHEET C-03)

SUMMARY OF QUANTITIES

BASE BID - PROJECT LOCATION #1: JOHN DEUTSCH CULVERT REPLACEMENT

ITEM	UNIT	QUANTITY
TREE REMOVAL (6 to 15 UNIT)	UNIT	281
TREE REMOVAL (OVER 15 UNIT)	UNIT	352
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (extra undercut of culvert only)	CU.YD.	100
ROCK EXCAVATION	CU.YD.	8
POROUS GRANULAR EMBANKMENT (extra undercut of culvert only)	CU.YD.	100
* SODDING, SALT TOLERANT	SQ.YD.	260
* TOPSOIL EXCAVATION AND PLACEMENT	CU.YD.	116
TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH	SQ.YD.	700
* EROSION CONTROL BLANKET	SQ.YD.	706
* INLET AND PIPE PROTECTION	EACH	3
* TEMPORARY DITCH CHECKS - COIR LOG	LIN FT.	240
STONE RIPRAP, CLASS A4	SQ. YD.	346
AGGREGATE BASE COURSE, TYPE B, 6"	SQ.YD.	168
* AGGREGATE BASE COURSE, TYPE B, 4", SPECIAL	SQ.YD.	290
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50, 2"	TON	188
HOT-MIX ASPHALT BINDER COURSE, IL-19, N50, 3"	TON	79
HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ.YD.	1,175
* PAVEMENT REMOVAL, FULL DEPTH	SQ.YD.	168
* HOT-MIX ASPHALT SURFACE REMOVAL, 7", SPECIAL	SQ. YD.	290
* PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT	SQ.YD.	63
* SIDEWALK REMOVAL	SQ.FT.	200
* PORTLAND CEMENT CONCRETE SIDEWALK, SPECIAL, 8"	SQ.FT.	200
NAME PLATES	EACH	1
* PRECAST CONCRETE BOX CULVERT, 12' X 8'	LIN FT.	128
* BOX CULVERT END SECTIONS	EACH	2
STEEL FLARED END SECTIONS 12"	EACH	1
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	85
TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
SHORT TERM PAVEMENT MARKING, TAPE	SQ. FT.	630
SHORT TERM PAVEMENT MARKING REMOVAL	SQ. FT.	630
* REMOVAL OF EXISTING STRUCTURES, SPECIAL	EACH	1
* CURB REMOVAL AND REPLACEMENT	LIN FT.	64
* STORM SEWER REMOVAL, D.I., 12"	LIN FT.	6
* CUT AND CAP EXISTING 8" WATERMAIN	EACH	1
* CONSTRUCTION LAYOUT	LSUM	1
* LANDSCAPE WALL	SQ.FT.	63
* SEEDING	SQ.YD.	706
* LANDSCAPE MAINTENANCE - YEAR 1	LSUM	1
* LANDSCAPE MAINTENANCE - YEAR 2	LSUM	1
* LANDSCAPE MAINTENANCE - YEAR 3	LSUM	1
* EROSION CONTROL FENCE	LIN FT.	500
WATERMAIN REMOVE & REPLACE 8" DUCTILE IRON, CLASS 52 WITH POLYETHYLENE ENCASEMENT	LIN FT.	80
* STORM SEWER, PVC, 12"	LIN FT.	25
* TEMPORARY FLOW BYPASS	LSUM	1
* CLEARING	ACRES	0
* TRAFFIC CONTROL	LSUM	1
* DEBRIS REMOVAL FROM CHANNEL	LSUM	1
* CONTINGENCY	LSUM	1

BASE BID - PROJECT LOCATION #2: 7TH AVENUE CULVERT REPAIRS

ITEM	UNIT	QUANTITY
* TEMPORARY DITCH CHECKS - COIR LOG	LIN. FT.	40
STONE RIPRAP, CLASS A4	SQ. YD.	39
* REPAIR OF EXISTING CMP INVERT VOIDS	SQ. FT.	210
* TEMPORARY FLOW BYPASS	LSUM	1
* GROUT INJECTION OF VOIDS BEHIND CULVERT WALLS	LSUM	1
* DEBRIS REMOVAL FROM CULVERTS	LSUM	1

ALTERNATIVE BID FOR PROJECT LOCATION #1, JOHN DEUTSCH CULVERT REPAIRS

ITEM	UNIT	QUANTITY
* TEMPORARY DITCH CHECKS - COIR LOG	LIN. FT.	120
STONE RIPRAP, CLASS A4	SQ. YD.	34
* REPAIR OF EXISTING CMP INVERT VOIDS	SQ. FT.	480
* TEMPORARY FLOW BYPASS	LSUM	1
* DEBRIS REMOVAL FROM CULVERTS	LSUM	1

ALTERNATIVE BID FOR PROJECT LOCATION #2, 7TH AVENUE CULVERTS, GEOPOLYMER LINING

ITEM	UNIT	QUANTITY
* GEOPOLYMER LINER	LIN. FT.	788

\* = INDICATES PROJECT SPECIAL PROVISION WRITTEN FOR THIS PAY ITEM.

PROJECT LEGENDS:

	DESIGNATES PROPOSED HMA PAVEMENT
	DESIGNATES PROPOSED PCC PAVEMENT
	DESIGNATES RIDGE LINES
	DESIGNATES PROPOSED CONCRETE SIDEWALK
	DESIGNATES AREA OF DEPRESSED SIDEWALK
	DESIGNATES AREA TO UTILIZE TRUNCATED DOMES
	DESIGNATES EROSION CONTROL MEASURE (SEE SHEET C-05-EC-05 FOR EROSION CONTROL LEGEND)
	DESIGNATES SILT FILTER FENCE (LIMITS OF GRADING) (SEE SPECIFIED SHEET FOR DETAILS.)
	DESIGNATES AREA TO BE SEEDDED (SEE LANDSCAPE PLANS)
	DESIGNATES AREA TO BE SEEDDED AND TO UTILIZE EXCELSIOR BLANKET (SEE DETAILS) (SEE LANDSCAPE PLANS)
	DESIGNATES PROPOSED RIPRAP AREA (SEE DETAILS) (QUANTITY AS INDICATED)
	DESIGNATES TEMPORARY CONSTRUCTION ACCESS
	DESIGNATES CONCRETE CURB & GUTTER
	DESIGNATES REVERSE CURB & GUTTER
	DESIGNATES AREA OF DEPRESSED CURB AND GUTTER.
	DESIGNATES TREE AND BRUSH REMOVAL (SEE SHEET FOR SIZE AND QUANTITY)
	DESIGNATES TREE TRUNK & ROOT PROTECTION (POTENTIAL ROOT PRUNING REQUIRED) (SEE SHEET EC-03 FOR DETAIL)
	DESIGNATES MAINTAIN 18" VERTICAL SEPARATION PER TO I.E.P.A.'S REQUIREMENTS
	DESIGNATES SANITARY SEWER TAG
	DESIGNATES WATER MAIN TAG
	DESIGNATES STORM SEWER TAG
	DESIGNATES CROSSING TAG

Dial 811 or 1-800-892-0123

JULIE DESIGN TICKET NUMBER:# A1861870



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CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP  
SEC. & 1/4 SEC. NO.# 34 & 35-40 N.-8 E.

Two (2) working days before you dig  
(Excluding Sat., Sun. & Holidays)

SITE BENCHMARKS:

SOURCE BENCHMARK: CITY OF ST. CHARLES BENCHMARK #19 TO REACH THE STATION FROM THE INTERSECTION OF MAIN STREET(ILLINOIS ROUTE 64) AND NORTH 5TH AVENUE (ILLINOIS ROUTE 25) IN ST. CHARLES, GO EASTERLY ON ROUTE 64 FOR 0.9 MILES TO AN INTERSECTION. TURN RIGHT AND GO SOUTH ON TYLER ROAD FOR 0.8 MILES TO AN INTERSECTION. TURN RIGHT AND GO 0.1 MILES SOUTH TYLER ROAD TO AN INTERSECTION. TURN RIGHT AND GO WEST ON RONZHEIMER AVENUE FOR 0.1 MILES TO STATION ON THE RIGHT.

THE STATION IS THE TOP-CENTER OF A 2 ½ INCH DIAMETER ALUMINUM DISK STAMPED -STC 19 2008-- CONTAINING A SMALL MAGNET AND MOUNTED ON TOP OF A ¾ INCH ALUMINUM ROD INSIDE GREASE-FILLED PLASTIC EXTRUDED FIN SLEEVE. AN ALUMINUM ACCESS COVER MOUNTED ON A 6-INCH DIAMETER PVC PIPE WAS INSTALLED. THE MARK IS 56.2 FEET NORTHWEST OF THE CENTER OF A STORM MANHOLE, 33.6 FEET NORTH OF THE CENTER OF A WATER MANHOLE, 26.3 FEET WEST-SOUTHWEST OF THE CENTER OF A SANITARY MANHOLE, AND 2.6 FEET NORTH OF THE EDGE OF PAVEMENT ALONG THE NORTH SIDE OF RONZHEIMER AVENUE.  
ELEV: 761.17 (NAVD 88)

B.M. 22A: "ARROW" FLANGE BOLT ON THE FIRE HYDRANT ON NORTHEAST QUADRANT OF RONZHEIMER AND 7TH ST.  
ELEV:713.00 (NAVD 88)  
\*\*AREA APPEARED TO BE RECENTLY DISTURBED. NEW ELEVATION ESTABLISHED ON FIRE HYDRANT\*\*

B.M. 23: "TAG" FLANGE BOLT ON THE FIRE HYDRANT AT THE NORTHEAST QUAD OF THE INTERSECTION OF FERN AVE. AND 7TH AVE.  
ELEV: 726.40 (NAVD 88)

B.M. 24: CROSS CUT ON SIDE WALK ON SOUTH SIDE OF MADISON AVE, APPROXIMATELY 135 FEET EAST OF THE CENTERLINE OF 7TH AVE.  
ELEV: 724.26 (NAVD 88)

B.M. 32: "TAG" FLANGE BOLT ON THE FIRE HYDRANT ON THE NORTH SIDE OF SPRING AVE, BETWEEN # 930 & 924  
ELEV: 717.59 (NAVD 88)

\*\*BENCHMARKS WERE ESTABLISHED ON JULY/AUGUST OF 2015 AS PART OF PROJECT 86150238 IN FB: NL-3, PG: 47-49 & 62

SYMBOL LEGEND

EXISTING	PROPOSED

STANDARD ABBREVIATIONS

B-B – BACK TO BACK OF CURB  
B.C. – BACK OF CURB  
B.O.C. – BACK OF CURB  
B.S.L. – BUILDING SETBACK LINE  
P.S.L. – PARKING SETBACK LINE  
C.B. – STORM CATCH BASIN  
C.E. – COMMONWEALTH EDISON CO.  
D.E. – DRAINAGE EASEMENT  
E-E – EDGE TO EDGE OF PAVEMENT  
E.O.P. – EDGE OF PAVEMENT  
E.O.S. – EDGE OF SHOULDER  
E.P. – EDGE OF PAVEMENT  
E.S. – EDGE OF SHOULDER  
F.E.S. – FLARED END SECTION  
I.B.T. – ILLINOIS BELL TELEPHONE CO.  
L.E. – LANDSCAPE EASEMENT  
M.H. – MANHOLE (TYPE SPECIFIED ON PLANS)  
R.C.M.E. – ROAD CONSTRUCTION & MAINTENANCE EASEMENT  
R.O.W. – RIGHT OF WAY  
S.R.L. – SEPTIC RESTRICTION LINE  
T.B.F. – TRENCH BACKFILL  
T.C. – TOP OF CURB  
T.C.E. – TEMPORARY CONSTRUCTION EASEMENT  
T.O.B. – TOP OF BERM  
T.O.C. – TOP OF CURB  
U.E. – UTILITY EASEMENT  
P.S.L. – PARKING SETBACK LINE  
P.U.E. –PUBLIC UTILITY EASEMENT  
P.G.L. – PROFILE GRADE LINE

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DRAWN BY: MPL	JOB DATE: 10/27/2017	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
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McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

CIVIL – FINAL ENGINEERING  
GENERAL NOTES

SHEET NO.

C-02

Xrefs: xgl-1-dh01: 86140185.06-C-Tabulations



GENERAL NOTES CONTINUED:

- H. Removal of Storm and Sanitary Sewer Pipes: This work consist of removing and disposal of all storm and sanitary sewer structures and related pipes as shown on the plans. Storm and Sanitary Sewer removal will be paid for at the contract per lineal foot price. Structures shall be paid for at the contract unit price each. Both are to include all labor to remove the pipes and structures and trench backfill with compaction is to be considered incidental to the unit cost of removal.
- I. UTILITIES IN EMBANKMENT SECTION. All embankment material which is to be placed within the area of influence of proposed underground utilities, as shown on the plans, including storm sewer, water main, and sanitary sewer, shall be compacted to 95% of Standard Proctor. The area of influence shall be determined as follows:
- Horizontal Alignment: The horizontal area of influence shall be that area 5 foot from both sides of the proposed trench alignment.
  - Vertical: The vertical area of influence shall be determined as that area located directly under the horizontal alignment as defined in (1) from the bottom of the proposed subgrade to the top of the remaining in-situ material after topsoil stripping and undercutting as directed by the Engineer or as shown on the plans.
  - The subgrade shall be free of unsuitable material and shall be compacted to a minimum of ninety-five percent (95%) of modified Proctor density. Testing for compaction shall be the responsibility of the Contractor. All topsoil and any organic materials **must** be removed.
  - Easements for the existing utilities, both public and private, and utilities within public rights-of-way are shown on the plans according to available records. The Contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations. If existing utility lines of any nature are encountered which conflict in location with new construction, the Contractor shall notify the Engineer so that the conflict may be resolved.
  - Contractor shall be responsible for securing all Permits including municipal permits for all proposed improvements according to the plans designated as 7TH AVENUE CREEK, DRAINAGE IMPROVEMENTS AT JOHN DEUTSCH CULVERT.
4. STORM SEWER SYSTEM
- Storm sewers shall be laid straight in both horizontal and vertical planes between structures unless otherwise approved by the City Of St. Charles. Storm sewer trench spoil export shall be incidental to cast of storm sewer and contract. No stockpiling of spoils will be allowed in special management areas such as floodways, floodplains and wetlands.
  - Material Requirements
    - Storm sewers shall be of reinforced concrete pipe (RCP) in accordance with the Standard Specifications For Road and Bridge Construction, Illinois Department of Transportation, latest edition section 542. All storm sewer pipe 12" and larger shall be Class IV with O-rings conforming to ASTM C443. All publicly owned storm sewer to be televised prior to acceptance. all mud--debris is to be removed from sewers, manholes, and drainage structures.  
CL A2 = IDOT CLASS A, TYPE 2; CL B2 = IDOT CLASS B, TYPE 2.
    - DUCTILE-IRON PRESSURE SEWER PIPE AND FITTINGS
    - Pipe and Fittings: Ductile-Iron Pipe (DIP) shall conform to ANSI/AWWA C151/21 .51. Class thickness shall be designed per ANSI/AWWA C150/A21 .50 , and tar coated and cement lined per ANSI/AWWA C104/A21.4.
    - Pipe joints shall be 'O' ring joints conforming to ASTM C-361.
    - Manholes, catch basins and inlets shall be precast reinforced concrete conforming to ASTM C-478.
    - All drainage structures and storm sewer pipes shall meet heavy duty traffic (H20) loading and be installed accordingly.
    - Joints between manhole, catch basin, and inlet sections shall be filled with preformed bitumastic joint filler of sufficient size to completely seal.
    - Adjusting rings shall be precast concrete rings.
    - Contractor shall televise storm sewer prior to project closeout and forward information to the city and engineer.
    - Castings.
      - Inlet and catch basin frames and grates in grassed areas shall be Neenah R-4340-B, or approved equal.
      - Manhole frames and grates shall be Neenah R-1713 or approved equal.
      - Steps shall be Neenah R-1981-I or approved equal.
    - Alternate storm sewer materials may be allowed upon review and approval of City Of St. Charles.
5. CONSTRUCTION REQUIREMENTS
- Storm sewers shall be constructed in accordance with the "Standard Specifications for Road and Bridge Construction" Illinois Department of Transportation, Standard Specifications for Water and Sewer Main Construction in Illinois, the pipe manufacturer's recommendations, and these Development Standards.
  - Adjusting rings for manholes, catch basins, and inlets shall be limited to a maximum of three (3) rings of maximum height of eight (8) inches.
  - When adjusting rings are required on structures a cement mortar or bituminous material coating shall be applied to the outside of the rings.
  - Lifting holes in structure sections and sewer pipe shall be plugged with appropriate sized concrete lift plugs and coated with bituminous material.
6. INSPECTION AND TESTING
- All sewers and appurtenances shall be cleaned prior to inspection and testing. Upon completion of construction and prior to acceptance of the storm sewer and again prior to expiration of the maintenance guarantee, the storm sewers shall be inspected through the use of standard T.V. equipment for final approval. This cost shall be incidental to the utility work, Unless Noted Otherwise
7. STORM SEWER FLARED END SECTIONS
- When a precast reinforced concrete or metal flared end section is used at the end of a storm sewer pipe, the length of storm sewer pipe does not include the length of the end section. The proposed slope of this pipe is then calculated by including the length of the end section into the overall length.
  - The Engineer and City Of St. Charles, shall be notified if, during construction, any buried field ties are exposed or disturbed. The Contractor shall reconnect said field ties if deemed necessary. To be measured and paid for per 109.04 of the Standards Specifications.
9. CLEARING, TREE REMOVAL, BUSH REMOVAL, AND PROTECTION
- Contractor shall provide Clearing, tree removal, bush removal and protection as per section Article 201 of the Standard Specifications.
12. CONSTRUCTION FENCING
- Perimeter Construction Fencing to be placed per the location shown in plan. Fencing of areas for contractors stockpile, staging, security and safety shall not be measured for payment. Construction fencing shall be adjusted at the Owner's direction when it interferes with the Owner's operations.
12. CONSTRUCTION OBSERVATION
- All improvements shall be subject to observation by a duly authorized and qualified City or owner's representative both during the course of construction and after construction is complete for final project closeout.
13. EROSION CONTROL. It shall be the Contractor's responsibility to properly control erosion on the jobsite. Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor until the seeding has taken hold. All washouts, gullies, etc. will be regraded and reseeded by the Contractor. Site grading shall not proceed until erosion control measures have been installed.
- The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for clean-up of paved surfaces within and adjacent to the project on a timely basis and/or at the direction of the Engineer, City & or Kane-DuPage soil and water conservation district.

All construction will adhere to the requirements set forth in the IEPA's General NPDES Permit for Stormwater Discharge from construction site activities.

For all drainage structures in the disturbed areas, inlet protection shall be placed and maintained by the Contractor until vegetation is established, as determined by the City.

Erosion control measures must be inspected weekly and after every storm of one half inch of rainfall or greater by the Contractor. An inspection report must be submitted by the Contractor to the City following each inspection. Any repairs or replacement needed to ensure adequate erosion control must be made immediately at the Contractor's expense.

Contractor shall amend NOI with contractor's information prior to start of construction. A copy of the NOI must be submitted to the City before the required pre-construction conference can be scheduled with the City's Public Works Department.

Construction & Silt fencing must be installed prior to starting construction.

Contractor shall submit a Notice Of Termination (N.O.T.) after substantial completion of project including restoration.

14. TOPSOIL PLACEMENT. Contractor shall place stockpiled topsoil or imported material on all disturbed areas with a minimum 6" topsoil raked smooth to be ready for landscaping (seeding, sod, etc.).
15. SEEDING. All unpaved areas within the street right-of-way shall be sodded with a Class IA mixture, unless otherwise noted in plan or approved the Engineer. All unpaved areas between the edge of the road and the right-of-way shall have an adequate growth of grass before work is finally accepted.
- A. In areas outside of ROW, Class 1A Seed Mixture (70%) and Mulch Method 2 per Article 251.03 are to be used unless otherwise noted in plan or approved by the Engineer.

**16. No construction plans shall be used for construction unless specifically marked "For Construction." Prior to commencement of construction, the Contractor shall verify all dimensions and conditions affecting their work with the actual conditions at the job site. If there are any discrepancies from what is shown on the construction plans, he must immediately report same to the Engineer before doing any work, otherwise the Contractor assumes full responsibility. In the event of disagreement between the construction plans, standard specifications and/or special details, the Contractor shall secure written instructions from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. Failing to secure such instructions, the Contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or question arising with respect to the true meaning of the construction plans or specifications, the decision of the Engineer shall be final and conclusive.**

17. Sawing of removal items as noted on the plans, specified in Section 440 of the Standard Specifications, or as required by the engineer, shall be considered incidental to the cost of the item being removed, and no extra compensation will be allowed, unless otherwise specified. All pavement removed within the 1-foot sawcut along the item being sawcut shall be considered incidental to earth excavation.
18. Where storm sewer is located above the water main, the reinforced concrete pipe shall have O-rings to provide a water tight seal and to create a water quality pipe.

19. INDEMNIFICATION

Contractor shall provide indemnification as per Article 107.26 of the Standard Specifications. All costs for insurance shall be considered incidental to the contract.

ADDITIONAL REQUIREMENTS: The Contractor shall also indemnify and hold harmless, HR Green, Inc., the Consultant selected for Construction Engineering Services (yet to be determined), City of St. Charles, its officers, employees, agents, and subcontractors. The Contractor shall not commence work until additional indemnification requirements have been obtained under this paragraph.

20. INSURANCE AND LIABILITY

Contractor shall provide insurance coverage as per Article 107.27 of the Standard Specifications. All costs for insurance shall be considered incidental to the contract.

The "Department" shall be taken to mean The City of St. Charles. The policy of insurance shall include HR Green, Inc., the Consultant selected for Construction Engineering Services (yet to be determined), City of St. Charles, and it's Agents as an additional insured, or provide separate coverage with an Owner's Protective Policy, as per the amounts stated in the Standard Specifications. No work shall begin until the certificate of insurance is on file with the Engineer.

ADDITIONAL REQUIREMENTS: The Contractor shall secure and maintain such insurance from an insurance company authorized to write casualty insurance in the State where the work is located and also will protect and list as additional insured, HR Green, Inc., the Consultant selected for Construction Engineering Services (yet to be determined), City of St. Charles, and his subcontractors and his employees from claims for bodily injury, death or property damage which may arise from improvements on the property. The Contractor shall not commence work until he/she has obtained all insurance required under this paragraph and filed the certificate of insurance or the certified copy of the insurance policy.

21. SITE CLEAN UP

When construction operations take place adjacent to public roadways the contractor shall be responsible for removal of all loose debris deposited on the pavement. The stock piling of spoils from foundations or utility excavations will not be allowed on the pavement or in special management areas such as floodplains or wetlands.

22. LANDSCAPING & RESTORATION

Remove existing trees and bushes as necessary for construction and only as approved by the City. Replacement will be per City ordinance.

Trees indicated to be protected shall be bored/tunneled or shall have root pruning done as necessary. Root pruning shall be considered included in the cost of tree trunk protection, no additional compensation shall be allowed. All root pruning must be approved by the Owner's appointed representative. Boring/tunneling shall be paid for at the unit price per each for tree to be tunneled.

The contractor shall take care in grading near trees, shrubs and bushes which are not to be removed so as not to cause injury to the roots, trunks or limbs. This work shall be included and paid for as "Tree Protection." Saw cutting of tree roots shall be considered incidental to the contract.

Tree protection fencing shall be installed 5' outside drip line.

Landscaping including, but not limited to trees, shrubs, bushes, retaining walls, decorative landscaping items, seeding and etc., located in the disturbed area, as indicated on the plans, shall be restored by the contractor to the satisfaction of the engineer. This work shall be paid for under the unit price for landscape restoration.

The contractor shall make every effort to avoid disturbing any existing residential landscaping, landscaping appurtenances, walkways, retaining walls, etc, that are not marked for removal on the plans. If damage occurs, the contractor shall replace, in kind, the residential item or items at his/her expense in a manner meeting with the approval of the Engineer. All vegetation being removed shall be replaced with the same size and type. No additional compensation will be allowed for damaged items.

Final grade shall meet existing grade and shall be of at least 6" of topsoil, salt tolerant seed (CL-1A) with erosion control blanket, unless otherwise noted in plan, with salt tolerant sod used within unpaved areas of the ROW unless approved otherwise by the Engineer. All grading shall be considered included in the cost of Precast Concrete Box Culvert at John Deutsch Drive over 7th Ave. Creek.

23. STAKING

The contractor shall be responsible for establishing construction staking for the project site which will be paid for as a lump sum item, CONSTRUCTION STAKING. The Contractor shall protect and carefully preserve all section or subsection monuments or property or reference markers until the Owner, his agent or an authorized surveyor has witnessed or otherwise referenced their locations

All offset locations given on the detailed plans for structures, fittings, etc., are from the centerline of the existing roadway, as shown on these plans.

The Engineer shall be responsible for providing electronic files to help facilitate the contractor's construction staking.

All elevations are on U.S.G.S. Datum. (NAVD 88)

24. MISCELLANEOUS

The Contractor shall notify the CITY OF ST. CHARLES and the residents within the project limits a minimum of 48 hours prior to the start of construction.

All work performed relative to this improvement shall comply with all applicable rules and regulations of O.S.H.A.

All construction personnel will be required to wear a safety vest, complying with the latest O.S.H.A. requirements, at all times while at the construction site. Compliance with this requirement shall be considered as incidental to the contract.

Unless otherwise indicated, the cost of all materials required and all labor necessary to comply with the above provisions will not be paid for separately, but shall be considered as included in the unit bid prices of the contract, and no additional compensation will be allowed.

The Contractor shall be responsible for the installation and maintenance of adequate signs, traffic control devices, and warning devices to inform and protect the public during all phases of construction. See Special Provisions. This work be measured and paid for as Traffic Control and Protection for Temporary Detour, Unless Noted Otherwise

The tops of existing manholes, inlet structures, sanitary cleanout tops, dry utility hand holes, & utility boxes shall be adjusted, if required, to match proposed grades in accordance with all applicable standards.

The contractor is responsible for verification of existing topographic information and utility invert elevations prior to commencement of any construction. Contractor to ensure 0.50% minimum slope along all islands, gutters, and curbs; 1.0% on all concrete surfaces; and 1.5% minimum on asphalt, unless noted otherwise, to prevent ponding. Any discrepancies that may affect the public safety or project cost must be identified to the engineer in writing immediately. Proceeding with construction without notification is done so at the contractor's own risk.

Part of the proposed project is located within a flood hazard area

The contractor shall confine their grading operations to within construction limits and easements shown on the plans. Any damage to properties outside the site boundary shall be at the sole responsibility of the contractor.

The contractor shall apply necessary moisture control to the construction area and haul roads to prevent the spread of dust.

All field ties encountered shall be replaced and/or connected to the storm sewer system and located and identified on the record plans by the contractor.

All storm drainage construction shall be performed in accordance with the City of St. Charles.

Elevations and contours are to state plane coordinates per NAVD 88 datum.

1 week prior to construction within City row or any connection to public sewers, contractor shall notify the appropriate City engineering divisions (see contact information on cover sheet of this plan set).

The contractor shall not disturb desirable grass areas and desirable trees outside the construction units. The contractor shall not be permitted to park or service vehicles and equipment or store materials in areas outside of the optional staging area shown in plan. Requests for additional storage, parking and service areas will be subject to the approval of the owner.

The contractor is responsible for replacing any areas of pavement or sidewalk not to be removed that is damaged due to operating equipment on the pavement or sidewalk.

The contractor may be required to place temporary warning devices and safety fence at certain locations where replacement features are not installed the same day, as directed by the engineer or the Owner.

All construction within public row/easements and/or any connection to public sewers and streets, shall comply with the City construction specifications for subdivisions and latest edition of IDOT design standards

All subgrade and subbase shall be proofrolled per the City of St. Charis development ordinances engineering specifications.

Field verify elevations and locations of all connections to existing utilities prior to commencing construction.

Roof drains, foundation drains, and other clean water connections to the sanitary sewer system are prohibited.

Provide underdrains from seeps or springs encountered. extend to storm sewer system or daylight at the bottom of the the fill slope

Contractor to locate any electric lines servicing surrounding parking lot lighting and/or existing gate equipment with in the area of construction prior to construction.

Contractor shall coordinate temporary support and protection of the existing fiber optic lines and comcast cable lines that will be exposed by culvert excavation.

WATER MAIN GENERAL NOTES:

- All water main construction shall be in accordance with plans specifications, and details, special provisions and in accordance with codes and ordinances of the City of St. Charles, the standard specifications for water and sewer main construction in Illinois (latest edition), standards specifications for road and bridge construction (latest version) and supplemental specifications, and IEPA Title 35.
- It shall be the contractor's responsibility to ensure that the proposed water main and service line installation conforms to all state, local, and project-specific requirements with regard to minimum cover, separation, etc. Separation between water mains and sewers shall be in accordance with the requirements of the standard specifications for water and sewer construction in Illinois, latest edition.
- The locations of existing underground utilities, such as water mains, sewers, gas lines, pipelines, etc. shown on the plans have been determined from the best available information and are given for the convenience of the contractor. however, the engineer and the owner do not assume responsibility in the event that during construction, utilities other than those shown may be encountered, and that the actual location of those which are shown may be different from the location as shown on the plans. it shall be the contractor's responsibility to contact all utility companies and locate their facilities prior to any work.
- The contractor shall be responsible for the protection of all underground or surface utilities even though they may not be shown on the plans. Any utility that is damaged during construction shall be repaired or replaced to the satisfaction of the owner and operator of the damaged utility. This work shall be at the contractor's expense.
- Temporary plugs, sleeves, flushing hydrants, and blowoff taps may be needed for pressure testing the new main prior to making connections to the existing distribution system. These items are considered incidental to the installation and/or testing of water mains.
- Removal and disposal of existing piping, fittings, etc. shall be considered incidental to the installation of the water main and all materials shall be disposed of properly by the contractor.
- The contractor shall remove all valves, castings, or hydrants from the water main to be abandoned. existing basins or vaults shall be abandoned in place and filled with sand. When requested by the City of St. Charles, the contractor shall salvage and deliver to the village any existing valves, castings, or hydrants from the abandoned water main. All other pipe and appurtenances removed from the abandoned water main shall become the property of the contractor.
- The water main shall be installed to a minimum cover of five and one half (5.5) feet unless otherwise indicated on the plans.
- Temporary support or relocation of existing utilities may be required as a result of construction of this project. It shall be the contractor's responsibility to coordinate the required work with the respective utility companies in order to avoid unnecessary delays to construction. The contractor shall work closely with the utilities to locate, plan, and support these facilities in a manner which minimizes utility shut-off and keeps the project on schedule.
- All ductile iron fittings shall be encased in polyethylene wrap in accordance with the contract documents.
- The contractor shall provide the labor and equipment necessary to determine the exact location and elevation of all utility crossings which may cause conflicts. These determinations shall be made prior to the start of actual construction. The contractor shall contact the utility company prior to beginning excavation. The contractor shall also then uncover the utility, assist the engineer in determining the elevation at the pipe, and backfill the excavation.
- It shall be the contractor's responsibility to haul and properly dispose of excess material (including excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment will be allowed for material disposed of and not incorporated into the work. no material shall be placed outside of the right-of-way, unless specifically stated in the plans or approved by the engineer.
- The contractor is responsible for maintaining access to individual properties during construction. property owners shall be notified at least 48 hours in advance of work that would affect or alter their access. Temporary access drives shall be provided for all properties if access is to be disrupted for an excessive amount of time, as determined by owner and engineer. Temporary access drives shall consist of full-depth clean crushed stone properly compacted.
- Owner will provide the contractor water for flushing, disinfection, and pressure testing operations free of charge. Water will be made available through existing water main connections or nearby fire hydrants. The contractor shall provide backflow prevention devices for fire hydrant connections. The contractor shall take reasonable precautions for water conservation.
- A precast concrete thrust block shall be installed at all connection points with existing piping between new connection fittings and existing piping. concrete thrust blocks are incidental to the cost of water main.
- Before starting any excavation, the contractor shall call "julie" (joint utility location information for excavation) at 8-1-1 and the City of St. Charles at (630) 377-4405 for field locations of buried utilities (48 hours notification is required).
- No excavations will be permitted to remain open over any weekend and no excavations shall be left open overnight in any residential area.
- The engineer and city are not responsible for the construction means, methods, techniques, sequences or procedures, time of performance, programs or for any safety precautions used by the contractor. The contractor is solely responsible for execution of his work in accordance with the contract documents and specifications.
- Contractor shall be responsible for avoiding sewer main during construction. Any damage to the sewer main where the contractor is at fault shall be paid for by the contractor. Contractor shall use sewer camera to film sewer over entire length of project area upon completion of project. The cost of this work is incidental to water main installation.
- Surface features that are disturbed due to the construction of water mains, which are not included as part of the project improvements, shall be restored and be considered incidental to the water main work. Restoration that is incidental to the water main work shall be included in the unit costs for the water main work with no additional compensation allowed. restoration of surface features shall include, but not be limited to, sodding, seeding, removal and restoration of pavement, removal and restoration of sidewalk, removal and restoration of curb and gutter, and any other item that must be disturbed to install water mains as indicated in the project documents. Restoration work items that are considered incidental to water main work shall be performed per the requirements of project documents.
- Record drawings for the new water mains shall be prepared by the contractor and submitted to the City of St. Charles upon the project completion. any variations from the contract documents shall be indicated on the record drawings.
- The contractor shall submit to the engineer for approval a plan for phasing the new water main into service, including but not limited to: A summary of shut-downs, pressure testing procedures, methods of chlorination, sequence of connections, and abandonments of the existing water main.
- The contractor shall coordinate the installation of new water mains and the abandonment of existing water mains with the City of St. Charles. A minimum of two (2) weeks notice shall be provided to the City prior to the operation of valves, water main shut-downs, placing water mains into service, pressure testing, flushing, and chlorination activities. The contractor shall notify residents and businesses at least 48 hours prior to any disruption or shut-down.
- Pressure testing and disinfection of the new water mains shall be in accordance with the contract documents. Existing water mains shall remain in service until the new water main passes all tests.

FOR BID  
NOT FOR CONSTRUCTION

DRAWN BY: MPL JOB DATE: 10/27/2017  
APPROVED: AJ JOB NUMBER: 86140185.06  
CAD DATE: 7/31/2018 4:02:29 PM  
CAD FILE: J:\2014\86140185.06\CAD\DWGS\C\86140185.06-Cover.dwg

BAR IS ONE INCH ON  
OFFICIAL DRAWINGS.  
0" = 1"  
IF NOT ONE INCH,  
ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION



ILLINOIS DESIGN FIRM # 184.001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

CIVIL – FINAL ENGINEERING  
GENERAL NOTES

SHEET NO.  
C-03



SPECIFICATIONS AND GENERAL NOTES:

UNITED STATES ARMY CORPS OF ENGINEERS NOTES:

1. WORK IN THE WATERWAY SHOULD BE TIMED TO TAKE PLACE DURING LOW ORNO-FLOW CONDITIONS. LOW FLOW CONDITIONS ARE FLOW AT OR BELOW THE NORMAL WATER ELEVATION.
2. WATER SHALL BE ISOLATED FROM THE IN-STREAM WORK AREA USING A COFFERDAM. CONSTRUCTION OF NON-ERODIBLE MATERIALS (STEEL SHEETS, AQUA BARRIERS, RIP RAP AND GEOTEXTILE, FABRIC, ETC.) EARTHEN COFFERDAMS ARE NOT PERMISSIBLE.
3. WORK MAY NOT BE PERFORMED IN THE WATER, EXCEPT FOR THE PLACEMENT OF THE MATERIALS NECESSARY FOR THE CONSTRUCTION OF THE COFFERDAM. THE COFFERDAM MUST BE CONSTRUCTED FROM THE UPLAND AREA AND NO EQUIPMENT MAY ENTER THE WATER AT ANY TIME. IF THE INSTALLATION OF THE COFFERDAM CANNOT BE COMPLETED FROM SHORE AND ACCESS IS NEEDED TO REACH THE AREA TO BE COFFERED, OTHER MEASURES, SUCH AS THE CONSTRUCTION OF A CAUSEWAY, WILL BE NECESSARY TO ENSURE THAT EQUIPMENT DOES NOT ENTER THE WATER. ONCE THE COFFERDAM IS IN PLACE AND THE ISOLATED AREA IS DEWATERED, EQUIPMENT MAY ENTER THE COFFERED AREA TO PERFORM THE REQUIRED WORK.
4. IF BYPASS PUMPING IS NECESSARY, THE INTAKE HOSE SHALL BE PLACED ON A STABLE SURFACE OR FLOATED TO PREVENT SEDIMENT FROM ENTERING THE HOSE. THE BYPASS DISCHARGE SHALL BE PLACED ON A NON-ERODIBLE, ENERGY DISSIPATING SURFACE PRIOR TO REJOINING THE STREAM FLOW AND SHALL NOT CAUSE EROSION. FILTERING OF BYPASS WATER IS NOT NECESSARY UNLESS THE BYPASS WATER HAS BECOME SEDIMENT-LADEN AS A RESULT OF THE CURRENT CONSTRUCTION ACTIVITIES.
5. DURING DEWATERING OF THE COFFERED AREA, ALL WATER MUST BE FILTERED TO REMOVE SEDIMENT. POSSIBLE OPTIONS FOR SEDIMENT REMOVAL INCLUDE BAFFLE SYSTEMS, ANIONIC POLYMERS, DEWATERING BAGS, OR OTHER APPROPRIATE METHODS. WATER SHALL HAVE SEDIMENT REMOVED PRIOR TO BEING RE-INTRODUCED TO THE DOWNSTREAM WATERWAY. A STABILIZED CONVEYANCE FROM THE DEWATERING DEVICE TO THE WATERWAY MUST BE IDENTIFIED. DISCHARGE WATER IS CONSIDERED CLEAN IF IT DOES NOT RESULT IN A VISUALLY IDENTIFIABLE DEGRADATION OF WATER CLARITY.
6. THE PORTION OF THE SIDE SLOPE THAT IS ABOVE THE OBSERVED WATER ELEVATION SHALL BE ESTABLISHED AS SPECIFIED IN THE PLANS PRIOR TO ACCEPTING FLOWS. THE SUBSTRATE AND TOE OF SLOPE THAT HAS BEEN DISTURBED DUE TO CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS AND FULLY STABILIZED PRIOR TO ACCEPTING FLOWS.

COUNTY STORMWATER PERMIT REQUIREMENTS

SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. AREAS OF THE DEVELOPMENT SITE THAT ARE NOT TO BE GRADED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE UNTIL FINAL SEEDING IS PREFORMED.

SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, DEVELOPMENT SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.

STABILIZATION BY SEEDING SHALL INCLUDE TOPSOIL PLACEMENT AND FERTILIZATION, AS NECESSARY.

NATIVE SEED MIXTURES SHALL INCLUDE RAPID-GROWING ANNUAL GRASSES OR SMALL GRAINS TO PROVIDE INITIAL, TEMPORARY SOIL STABILIZATION.

OFFSITE PROPERTY SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT CONCENTRATED DISCHARGE LOCATIONS ALONG THE LENGTH OF ANY OUTFALL CHANNEL, AS NECESSARY TO PREVENT EROSION.

SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE DISTURBANCE OF TRIBUTARY AREAS.

STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE DEVELOPMENT SITE, OR TEMPORARY CEASED ON ANY PORTION OF THE DEVELOPMENT SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE, BUT NO LATER THAN 14 CALENDAR DAYS FROM THE INITIATION OF STABILIZATION WORK IN THE AREA. EXCEPTIONS TO THESE TIME FRAMES ARE SPECIFIED AS INSTANCES WHEN THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE AND IN AREAS WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED AND WILL RESUME AFTER 14 DAYS, A TEMPORARY STABILIZATION METHOD MAY BE USED.

DISTURBANCE OF STEEPS SLOPES SHALL BE MINIMIZED. AREAS OR EMBANKMENTS HAVING SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH STAKING IN PLACE SOD, EROSION CONTROL BLANKET IN COMBINATION WITH SEEDING, OR EQUIVALENT CONTROL MEASURE.

PERIMETER CONTROL MEASURES SHALL BE PROVIDED DOWN SLOPE AND PERPENDICULAR TO THE FLOW OF RUNOFF FROM DISTURBED AREAS, WHERE THE TRIBUTARY AREA IS GREATER THAN 5,000 SQUARE FEET, AND WHERE RUNOFF WILL FLOW IN A SHEET FLOW MANNER. PERIMETER EROSION CONTROL SHALL ALSO BE PROVIDED AT THE BASE OF SOIL STOCKPILES.

THE DRAINAGE SYSTEM SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION DOWN SLOPE FROM DISTURBED AREAS. INLET PROTECTION THAT REDUCES SEDIMENT LOADING, WHILE ALLOWING RUNOFF TO ENTER THE INLET SHALL BE REQUIRED FOR ALL STORM SEWERS. CHECK DAMS, OR AN EQUIVALENT CONTROL MEASURE, SHALL BE REQUIRED FOR ALL CHANNELS. FILTER FABRIC INLET PROTECTION AND STRAW BALE DITCH CHECKS ARE NOT ACCEPTABLE CONTROL MEASURES.

IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G., SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURES). THE ENGINEER AND THE KANE COUNTY SOIL AND WATER CONSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE COMMENCEMENT OF DEWATERING ACTIVITIES.

ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.

STOCKPILED SOIL AND MATERIALS SHALL BE REMOVED FROM FLOOD HAZARD AREAS AT THE END OF EACH WORK DAY. SOIL AND MATERIALS STOCKPILED IN IWMC OR BUFFER AREAS SHALL BE PLACED ON TIMBER MATS, OR AN EQUIVALENT CONTROL MEASURE.

EFFECTIVE CONTROL MEASURES SHALL BE UTILIZED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE DEVELOPMENT SITE. AT A MINIMUM, CONTROL MEASURES SHALL BE IMPLEMENTED IN ORDER TO:

MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATER.

MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, VEHICLE FLUIDS, SANITARY WASTE, AND OTHER MATERIALS PRESENT ON THE DEVELOPMENT SITE TO PRECIPITATION AND TO STORMWATER.

ADEQUATE RECEPTACLES SHALL BE PROVIDED FOR THE DEPOSITION OF ALL CONSTRUCTION MATERIAL DEBRIS GENERATED DURING THE DEVELOPMENT PROCESS. THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE DUMPING, DEPOSITING, DROPPING, THROWING, DISCARDING OR LEAVING OF CONSTRUCTION MATERIAL DEBRIS UPON OR INTO ANY DEVELOPMENT SITE, CHANNEL OR IWMC. THE DEVELOPMENT SITE SHALL BE MAINTAINED FREE OF CONSTRUCTION MATERIAL DEBRIS.

A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURES) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION-SITE OF A MAJOR DEVELOPMENT TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET ALLEY, OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT OF WAY, STREET, ALLEY OR PARKING AREA SHALL BE SCRAPED OR STREET CLEANED AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN AN EFFECTIVE WORKING CONDITION.

DRAIN TILE SYSTEMS DISTURBED DURING DEVELOPMENT MUST BE RECONNECTED BY THOSE RESPONSIBLE FOR THEIR DISTURBANCE UNLESS THE APPROVED ENGINEERING PLANS INDICATE HOW THE DRAIN TILE SYSTEM IS TO BE CONNECTED TO THE PROPOSED STORMWATER MANAGEMENT SYSTEM.

ALL ABANDONED DRAIN TILES SHALL BE REMOVED IN THEIR ENTIRETY.

DRAIN TILES WITHIN THE DISTURBED AREA OF THE DEVELOPMENT SHALL BE REPLACED, BYPASSED AROUND THE DEVELOPMENT OR INTERCEPTED AND CONNECTED TO THE DRAINAGE SYSTEM FOR THE DEVELOPMENT. THE SIZE OF THE REPLACED OR BYPASSED DRAIN TILE SHALL BE EQUIVALENT TO THE EXISTING DRAIN TILE.

KANE-DuPAGE SOIL AND WATER CONSERVATION DISTRICT SPECIAL PROVISIONS

1. The purpose of this soil erosion control plan is to protect the wetlands and streams on the site from siltation during land development activities.
2. Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed according to minimum standards and specifications in the Illinois Urban Manual.
3. The Kane-DuPage Soil and Water Conservation District (KDSWCD) must be notified one week prior to the pre-construction conference, one week prior to the commencement on land disturbing activities, and one week prior to the final inspection.
4. A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
5. Prior to commencing land disturbing activities in areas other than indicated on these plans (including but not limited to, off-site borrow or waste areas) the contractor shall submit a supplementary erosion control plan to the owner for review by the KDSWCD.
6. The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the KDSWCD.
7. During dewatering operations, water will be pumped into sediment basins or silt traps.
8. For additional details on specific erosion control practices see the attached "Soil Conservation Service Conservation Practice Standards".
9. The drainage area of all areas draining to silt fences shall be less than 0.5 acre per 100 ft of silt fence and have no drainage slope length in excess of 200ft.
10. All sediment ponds and temporary sediment traps shall be sized to store 134 cy per acre of tributary area not previously treated by another upstream sedimentation pond/trap.
11. All disturbed areas will be seeded within 7 days of the completion of grading, in most cases prior to the construction of building construction.
12. No proposed slopes in the disturbed areas exceed a slope of 3:1 horizontal to vertical.
13. The untreated tributary area to a manhole inlet shall not exceed 1 acre. Should an excavated drain be constructed around the manhole, the excavated drain shall be a minimum of 134 cy per acre of drainage area.
14. Riprap protection for proposed stormwater pipe outlets are sized to accommodate up to 10 fps outlet velocities.
15. All grass waterways shall be constructed at a 1% slope or less and consist of a trapezoidal channel design. They are designed to carry the estimated 2yr, 24hr rainfall event peak flow and will be either sodded or protected by erosion control blanket and seeded. All seeding shall be according to the seed types and dates noted on the plan and specification sheets of this plan. The design channel velocities are less than 4 fps. The dimension for each channel is noted on the grading plan.
16. Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.
17. The plan will be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.
18. Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.
19. The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway, will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.
20. If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.
21. During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.
22. The area from the toe to the top of the side slope shall be temporarily stabilized during construction to reduce the potential for erosion. All areas disturbed due to construction activities shall be restored to proposed conditions and fully stabilized prior to accepting flows.
23. THE CONTRACTOR SHALL SUBMIT AN IN-STREAM WORK PLAN TO KDSWCD INCLUDING METHODS AND MATERIALS BEFORE THE COMMENCEMENT OF CONSTRUCTION.

NOTES:

This plan has been prepared to comply with the provisions of the NPDES Permit Number issued by the Illinois Environmental Protection Agency for Stormwater Discharges from Construction Site Activities.

1. Site Description.

- a. The total area of the construction site is estimated to be 2.0± acres.

The total area if the site that is estimated to be disturbed by excavation, grading, or other activities, is 2.0± acres.

2. Controls.

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b above. For each measure discussed, the contractors will be responsible for its implementation as indicated. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

- a. Erosion and Sediment Controls.

(i) STABILIZATION PRACTICES. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a. (i) (A) and 2.b. stabilization of the disturbed areas must be initiated within one working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible but not later than 14 days form the initiation of the stabilization work in an area..

(A) Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

1 Temporary Seeding	5 Barrier filter	9 Vegetative channel
2 Permanent seeding	6 Inlet protection	10 Stabilized construction entrance
3 Erosion Blanket	7 Outlet protection	11 Dust & Traffic Control
4 Stone Riprap	8 Vegetative filter	12 Coir Logs

(ii)STRUCTURAL PRACTICES. Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

1. Temporary Flow Diversion and Cofferdams
2. Vegetated drainage swales
3. Permanent seeding
4. Stone Riprap
5. Outlet protection
6. Filter fabric
7. Inlet protection

- b. Erosion Control. It shall be the Contractor's responsibility to provide adequate erosion control on the job site. The following erosion control sequence shall be adhered to:

- 1A. Install silt fence along site perimeter.
- 1B. Clear site and perform grubbing.
- 2A. Mass grade using low points in profile as sediment ponds.
- 2B. If low points are to be drained by pumping, a sump pit shall be installed per the typical detail.
- 2C. Temporary seed all fill slopes around perimeter of project.
- 2D. Install silt fence per grading/erosion plan.
- 2E. Install storm sewer and inlet protection.
- 3A. Perform stream bank mass grading
- 3B. Install riffles and rock vane weirs.
- 4A. Stabilize with erosion control blankets per the erosion control plan.
- 4B. Plant native plugs and seed.

Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor, on a weekly basis, until the seeding has taken hold. 70% growth of permanent grass or temporary cover crop. All washouts, gullies, etc. will be regraded and reseeded by the Contractor, at the Contractor's expense.

The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project.

All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction," by the Illinois Department of Transportation and with "Standards and Specifications for Soil Erosion and Sedimentation Control" as published by the Illinois Environmental Protection Agency.

Contractor shall establish erosion control measures for any stockpile if it is to remain in place for more than three days. In addition, barrier filter fence shall enclose topsoil stockpile location. Labor and Material for stockpile areas are at the contractors expense and shall not be means for payment.

- c. Stormwater Management.

(i) Provided below is a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Specifications.

The stormwater pollutant control measures shall include:

- |                      |                              |                     |
|----------------------|------------------------------|---------------------|
| 1. Silt filter fence | 4. Rip-rap outlet protection | 6. RipRap buffers   |
| 2. Drainage swales   | 5. Pool / Riffles            | 7. Native Plantings |
| 3. Riparian Buffer   |                              |                     |

(ii)Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).

Stormwater Management Control includes

- |                                    |                     |
|------------------------------------|---------------------|
| 1. Stone Riprap                    |                     |
| 2. Filter Fabric                   | 5. Pool / Riffles   |
| 3. Outlet protection using RipRap. | 6. Native Plantings |
| 4. Inlet protection.               | 7. Riparian Buffer  |

3. Other Controls.

(i) Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off-site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.

(ii)The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.

- a. Approved State or Local Plans.

The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Standards and Specifications for Soil and Erosion and Sediment Control dated October 1987, Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Plan, and the Municipal Subdivision Ordinance. Requirements specified in sediment and erosion control site plans or site permits or stormwater management site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

- b. Maintenance.

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications. Contractor shall provide a bond for the maintenance period and use qualified staff or sub-contractor to perform maintenance (See Special Provision).

Monitoring and Management Plan

A 3-year maintenance and monitoring plan is required after installation of native landscaping. (See Project Special Provisions)

Stabilized construction entrance: The entrance shall be maintained to prevent tracking of sediment onto public streets. This will be done by top dressing with additional stones, remove and replace top layer of stones or washing the entrance. The sediment washed on the public right-of-way will be removed immediately. Contractor shall submit to owner and engineer proposed construction entrance location plan for approval.

Vegetative erosion control measures: The vegetative growth of temporary and permanent seeding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering and fertilizer. The vegetative cover shall be reseeded as necessary.

Silt filter fence: The damaged silt filter fence shall be restored to meet the standards or removed and replaced as needed.

Rip-rap outlet protection: It shall be inspected after high flows for any scour beneath the Rip-rap or for stones that have been dislodged. It shall be repaired immediately.

Inlet Protection: Shall be inspected and emptied of silt if filled as required.

Stabilization of the disturbed areas must be initiated within one working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible but not later than 14 days form the initiation of the stabilization work in an area.

(i) Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non-vegetative measures.

(ii)Areas having slopes greater than 12 percent shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent.

Soil storage piles containing more than 10 cu. yds. of material shall not be located with a downslope drainage length less than 25 feet to a roadway or drainage channel. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately on the down slope of the piles.

FOR BID  
NOT FOR CONSTRUCTION

CIVIL – FINAL ENGINEERING

EROSION CONTROL AND STORMWATER  
POLLUTION PREVENTION PLAN

SHEET NO.

C-04

Xrefs: xgt-1-dh01: 86140185.06--C--Tabulations

DRAWN BY: MPL	JOB DATE: 10/27/2017	BAR IS ONE INCH ON OFFICIAL DRAWINGS.
APPROVED: AJ	JOB NUMBER: 86140185.06	0"=1"
CAD DATE: 7/31/2018 4:02:29 PM		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
CAD FILE: J:\2014\86140185.06\CAD\DWgs\C\86140185.06-Cover.dwg		

NO.	DATE	BY	REVISION DESCRIPTION



ILLINOIS DESIGN FIRM # 184.001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL



SPECIFICATIONS AND GENERAL NOTES CONTINUED:

4. Inspections.

The Owner, or Owner’s representative shall provide qualified personnel to inspect disturbed areas of the construction site which have not been finally stabilized, structural control measures and location where vehicles enter or exit the site. Such inspections shall be conducted at least once every seven (7) calendar days within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall.

- a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.
- b. Based on the results of the inspection, the description of potential pollutant sources identified in section 1 above and pollution prevention measures identified in section 2 above shall be revised as appropriate as soon as practicable after such inspection. Any changes to this plan resulting from the required inspections shall be implemented within 7 calendar days following the inspection.
- c. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of this stormwater pollution prevention plan and actions taken in accordance with section 4.b. shall be made and retained as part of the plan for at least three (3) years after the date of the inspection. The report shall be signed in accordance with Part VI.G of the general permit.
- d. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incidence of Noncompliance" (ION) report for the identified violation. The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the cause of noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part VI. G of the general permit. The report of noncompliance shall be mailed to the following address:

Illinois Environmental Protection Agency  
Division of Water Pollution Control  
Attn: Compliance Assurance Section  
2200 Churchill Road  
Post Office Box 19276  
Springfield, Illinois 62794-9276

5. Non-Stormwater Discharges.

Except for flows from fire fighting activities, sources of non-stormwater that may be combined with stormwater discharges associated with the industrial activity addressed in this plan, are described below:

- a. Water main flushing  
b. Fire hydrant flushing  
c. Watering for dust control  
d. Irrigation drainage for vegetative growth for seeding, etc..

The pollution prevention measures, as described below, will be implemented for non-stormwater components of the discharge:

The fire hydrant and water main shall not be flushed directly on the exposed area of sub grade of the pavement. Hoses shall be used to direct the flow into the storm sewer system, if available.

The erosion due to irrigation of seeding shall be considered minor.

Contractor to provide the above non-stormwater discharged control to the standard specification required by the Village or the approved equal.

FOR BID  
NOT FOR CONSTRUCTION

EROSION CONTROL NOTES:

- No land disturbing activities shall not commence until approval to do so has been received by governing authorities, in addition to, no land clearing or grading shall begin until all perimeter erosion and sediment control measures have been installed.
- (Including storm water pollution prevention plan per the development criteria.)
- The general contractor shall strictly adhere to the storm water pollution prevention plan (swppp) during construction operations.
- All topsoil shall be stripped prior to filling
- All exposed areas shall be seeded as specified within 14 days of final grading.
- Should construction stop for longer than 14 days, the site shall be seeded as specified.
- Sediment and erosion control measures shall be inspected at least once every seven (7) days and within 24 hours of a rainfall exceeding 0.5 inches during a 24-hour period or more frequently if required by governing NPDES general permit. All maintenance required by inspection shall commence within 24 hours and be completed within 48 hours of report.
- This plan shall not be considered all inclusive as the general contractor shall take all necessary precautions to prevent soil sediment from leaving the site.
- General contractor shall comply with all state and local ordinances that apply.
- Additional erosion and sediment control measures will be installed if deemed necessary by on site inspection.
- If installation of storm drainage system should be interrupted by weather or nightfall, the pipe ends shall be covered with filter fabric.
- General contractor shall be responsible to take whatever means necessary to establish permanent soil stabilization.
- All sedimentation and erosion control regulations shall be adhered to per CITY OF ST. CHARLES’s requirements
- All erosion and sediment control practices shall be maintained and repaired as needed to ensure effective performance of the required erosion control measures.
- All erosion and sediment control work shall conform to the I.D.O.T. Manual for, standards and procedures for erosion control.
- All construction will adhere to the requirements set forth in the IEPA’s new construction site activities national pollutant discharge elimination system (NPDES) storm water permit.
- All roadways shall be cleaned at the end of each construction day.
- All disturbed areas shall be stabilized within 7 days of active disturbance.
- All erosion control measures shall be disposed of within 30 days of final stabilization of the site.
- Ground cover for 5:1 slopes or greater shall be established as soon as possible.
- All disturbed areas to to restored w/ 6" topsoil respread & seeding/sodding unless otherwise noted on plans
- Inlet protection such as Silt filter fabric or filter baskets shall be placed between frame and grate until vegetation is established. (see detail)
- Utilize excelsior blanket on all slopes of 5:1 or greater.
- \*Seeding per I.D.O.T. Manual, section 251,standard specifications for road and bridge construction, (latest edition
- \*Class 3 type – slope mixture
- \*Mulch/hydroseed per I.D.O.T. Manual, section 251, standard specifications for road and bridge construction, (latest edition
- \*Mulch/hydroseed method 2, procedure 3
- No dimensions shall be assumed by scaling.
- No known drain tiles are present on the proposed development, if tiles are encountered during construction please notify the engineer immediately.
- Part of the proposed project is located within a flood hazard 10–100yr area a flood hazard area
- Excess material shall be placed at specified location unless otherwise specified by owner and approved by engineer for use of lot grading. Stockpiles shall be surrounded with filter fence and shall be seeded per I.D.O.T. Manual (latest addition) (temporary) if left more than 14 working days.
- General contractor shall notify all utility companies having underground utilities on site or in right-of-way prior to excavation. Contractor shall contact utility locating company and locate all utilities prior to grading start.

PHASING NOTES:

- SEQUENCE OF MAJOR ACTIVITIES
- The Contractor will be responsible for implementing the following erosion control and storm water management control measures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows (refer to the Erosion and Sediment Control Plan Sheet contained in this SWPPP for details and refer to the Suggested Phasing Plan in the design drawings for construction sequencing):
- A. A pre-construction meeting shall be held by the Site Project Manager and the Operator’s Engineer prior to land disturbing activities.  
B. Install perimeter silt fences and inlet protection to existing storm infrastructure in the locations shown on the Demolition Plan sheets.  
C. Implement erosion control measures around the existing storm sewer system as shown on the Demolition Plan plan sheets.  
D. Construct temporary construction exits at locations shown on the Erosion Control plan sheets.  
E. Begin clearing and grubbing operations if applicable. Clearing and grubbing shall be done only in areas where earthwork will be performed.  
F. Disturbed areas of the site where Construction Activity has ceased for more than 7 days shall be temporarily seeded and watered.  
G. Commence site Mass/Rough grading using low points in profile as sediment ponds. If low points are to be drained by pumping, a sump pit shall be installed per the typical detail.  
H. Install new perimeter silt fences to newly graded areas per the locations shown on the Grading / Erosion Control plan sheets.  
I. Install inlet / outlet protection around the constructed storm sewer to prevent sedimentation from infiltrating into the storm sewer system as shown on the Erosion Control & Restoration Plan sheets.  
J. Temporary seed all fill slopes around perimeter of project.  
K. Carry out final stream bank stabilization measures with Plant native plugs, seeding, sodding and other plantings, including rolled erosion control products where shown on the Erosion Control & Restoration Plan sheets.  
L. Stockpile respread.  
M. Remove silt fencing only after all surfaces at are at least 70% growth of permanent seedings are stabilized.  
N. Remove temporary construction exits.  
O. Remove inlet protection around inlets and manholes.

CONTROL MEASURE GROUP	CONTROL MEASURE	APPL.	KEY	CONTROL MEASURE CHARACTERISTICS	TEMP.	PERMIT
VEGETATIVE SOIL COVER	TEMPORARY SEEDING	X	(TS)	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING IS NOT DESIRED OR TIME OF YEAR IS INAPPROPRIATE.	X	
	PERMANENT SEEDING	X	(PS)	PROVIDES PERMANENT VEGETATIVE COVER TO CONTROL EROSION, FILTERS SEDIMENT FROM WATER. MAY BE PART OF FINAL LANDSCAPE PLAN.		X
	DORMANT SEEDING		(DS)	SAME AS PERMANENT SEEDING EXCEPT IS DONE DURING DORMANT SEASON. HIGHER RATES OF SEED APPLICATION ARE REQUIRED.		
	SODDING		(SO)	QUICK PERMANENT COVER TO CONTROL EROSION. QUICK WAY TO ESTABLISH VEGETATION FILTER STRIP. CAN BE USED ON STEEP SLOPES OR IN DRAINAGEWAYS WHERE SEEDING MAY BE DIFFICULT.		
	GROUND COVER	X	(GC)	PROVIDES GROUND COVER, SHRUBS AND TREES IN ADDITION TO PERMANENT VEGETATION. MAY BE USED AS PART OF A FINAL LANDSCAPE PLAN ALONG WITH SHRUBS AND TREES.		X
	RAIN GARDEN		(RG)	PROVIDES A TYPE OF FUNCTIONAL LANDSCAPING FEATURE DESIGNED TO CONTROL STORMWATER RUNOFF. SEE LANDSCAPING PLANS FOR DETAILS.		
NON VEGETATIVE SOIL COVER	MULCHING	X	(M)	ADDED INSURANCE OF A SUCCESSFUL TEMPORARY OR PERMANENT SEEDING. CONTROLS UNWANTED VEGETATION AND PRESERVES MOISTURE. PROVIDES COVER WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	AGGREGATE COVER		(AG)	PROVIDES SOIL COVER ON ROADS AND PARKING LOTS AND AREAS WHERE VEGETATION CANNOT BE ESTABLISHED. PREVENTS MUD FROM BEING PICKED UP AND TRANSPORTED OFF-SITE.		
	PAVING	X	(P)	PROVIDES PERMANENT COVER ON PARKING LOTS AND ROADS OR OTHER AREAS WHERE VEGETATION CANNOT BE ESTABLISHED.		X
	EROSION BLANKET	X	(EB)	PROVIDES QUICK TEMPORARY COVER TO CONTROL EROSION WHEN PERMANENT SEEDING TIME OF YEAR IS INAPPROPRIATE AND IN SLOPED AREAS.		X
DIVERSIONS	RIDGE DIVERSION		(RD)	TYPICALLY USED ABOVE SLOPES. USED WHERE AN EXCESS OF SOIL IS AVAILABLE.		
	CHANNEL DIVERSION		(CD)	TYPICALLY USED AT TOP OR BASE OF SLOPES. USED WHEN EXCESS SOIL IS NOT AVAILABLE.		
	COMBINATION DIVERSION		(DC)	TYPICALLY USED ANYWHERE ON A SLOPE. SOIL TAKEN OUT OF CHANNEL IS USED TO BUILD THE RIDGE.		
	CURB AND GUTTER	X	(CG)	SPECIAL CASE OF DIVERSION USED IN CONJUNCTION WITH A STREET TO DIVERT WATER FROM AN AREA NEEDING PROTECTION.		X
	BENCHES		(B)	SPECIAL CASE OF DIVERSION CONSTRUCTED WHEN WORKING ON CUT SLOPES TO SHORTEN LENGTH OF SLOPE AND ADD SLOPE STABILITY.		
WATERWAYS	BARE CHANNEL		(BC)	PROVIDES MEANS OF CONVEYING RUNOFF TO DESIRED LOCATION. MAY BE USED TO DRAIN DEPRESSIONAL AREAS. ONLY APPLICABLE WHEN VELOCITY OF FLOW IS VERY LOW.		
	VEGETATIVE CHANNEL	X	(VC)	PROVIDED ADDED STABILITY TO CHANNEL. USED WHEN VELOCITY OF FLOW IS NOT EXTREMELY FAST.		X
	LINED CHANNEL		(LC)	USED WHEN VEGETATION WILL NOT PROTECT THE CHANNEL AGAINST HIGH VELOCITIES OF FLOW OR WHERE VEGETATION CANNOT BE ESTABLISHED.		
	DITCH CHECKS		(RC)	PROVIDES AN ENERGY DISSIPATOR ALONG A LENGTHY CHANNEL TO REDUCE VELOCITY OF STORMWATER		
ENCLOSED DRAINAGE	STORM SEWER	X	(ST)	CAN BE USED TO CONVEY SEDIMENT LADEN WATER TO SEDIMENT BASIN OR IN CONJUNCTION WITH A WATERWAY.		X
	UNDERDRAIN		(UD)	USED TO LOWER WATER TABLE AND INTERCEPT GROUNDWATER FOR BETTER VEGETATION GROWTH AND SLOPE STABILITY. USED TO CARRY BASE FLOW IN WATERWAYS AND TO DEWATER SEDIMENT BASINS.		
SPILLWAYS	STRAIGHT PIPE SPILLWAY		(SS)	USED FOR RELATIVELY SMALL VERTICAL DROPS AND SMALL FLOWS OF WATER		
	DROP INLET PIPE SPILLWAY		(DIS)	SAME AS PIPE SPILLWAY EXCEPT LARGER FLOWS AND LARGE VERTICAL DROPS CAN BE ACCOMMODATED.		
	WEIR SPILLWAY		(W)	USED FOR RELATIVELY SMALL VERTICAL DROPS AND FLOWS MUCH GREATER THAN PIPE STRUCTURES.		
	BOX INLET WEIR SPILLWAY		(BS)	SAME AS WEIR SPILLWAY EXCEPT LARGER FLOWS CAN BE ACCOMMODATED BECAUSE OF LOWER WEIR LENGTH.		
OUTLETS	LINED APRON		(LA)	PROTECTS DOWNSTREAM CHANNEL FROM HIGH VELOCITY OF FLOW DISCHARGING FROM STRUCTURES.		
	STONE RIP RAP	X	(RR)	USED AS AN ENERGY DISSIPATOR AT OUTLET STRUCTURES TO REDUCE VELOCITIES		X
SEDIMENT BASINS	EMBANKMENT SEDIMENT BASIN		(ES)	USED WHERE TOPOGRAPHY LENDS ITSELF TO CONSTRUCTING A DAM AND EARTH FILL IS AVAILABLE.		
	EXCAVATED SEDIMENT BASIN		(XS)	USED WHERE EMBANKMENT COULD CAUSE A HAZARD DOWNSTREAM IN CASE OF FAILURE AND WHEN EXCESS EARTH FILL IS NOT AVAILABLE.		
	COMBINATION SEDIMENT BASIN		(CS)	USED WHEN TOPOGRAPHY IS SUITABLE BUT ADDITIONAL CAPACITY IS NEEDED.		
SEDIMENT FILTERS	BARRIER FILTER	X	(BF)	USED FOR SINGLE LOTS OR DRAINAGE AREAS LESS THAN 1/2 ACRE TO FILTER SEDIMENT FROM RUNOFF.		X
	VEGETATIVE FILTER		(VF)	USED ALONG DRAINAGE WAYS OR PROPERTY LINES TO FILTER SEDIMENT FROM RUNOFF. SIZE MUST BE INCREASED IN PROPORTION TO DRAINAGE AREA.		
	FILTER BASKET		(FB)	USED FOR FILTERING SEDIMENT WITHIN THE ROADWAY BEFORE ENTERING THE STORM SEWER		
	FILTER FABRIC		(FF)	USED FOR FILTERING SEDIMENT WITHIN THE ROADWAY BEFORE ENTERING THE STORM SEWER		
	INLET PROTECTION	X	(IP)	USED FOR FILTERING SEDIMENT WITHIN GRASS AREAS BEFORE WATER ENTERS THE STORM SEWER		X
MUD AND DUST CONTROL	STABILIZED CONST. ENTRANCE	X	(SE)	PREVENT MUD FROM BEING PICKED UP AND CARRIED OFF-SITE.		X
	DUST AND TRAFFIC CONTROL	X	(DT)	PREVENTS DUST FROM LEAVING CONSTRUCTION SITE.		X

	RESPONSIBILITIES BY OTHERS			PER I.D.O.T. SPECIFICATIONS APR. 1 – JUNE 15			RESPONSIBILITIES BY OTHERS			PER I.D.O.T. SPECIFICATIONS AUG. 1 – NOV. 1			RESPONSIBILITIES BY OTHERS	
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG	SEPT.	OCT.	NOV.	DEC.		
STABILIZATION TYPE														
PERMANENT SEEDING														
SODDING														
TEMPORARY SEEDING														

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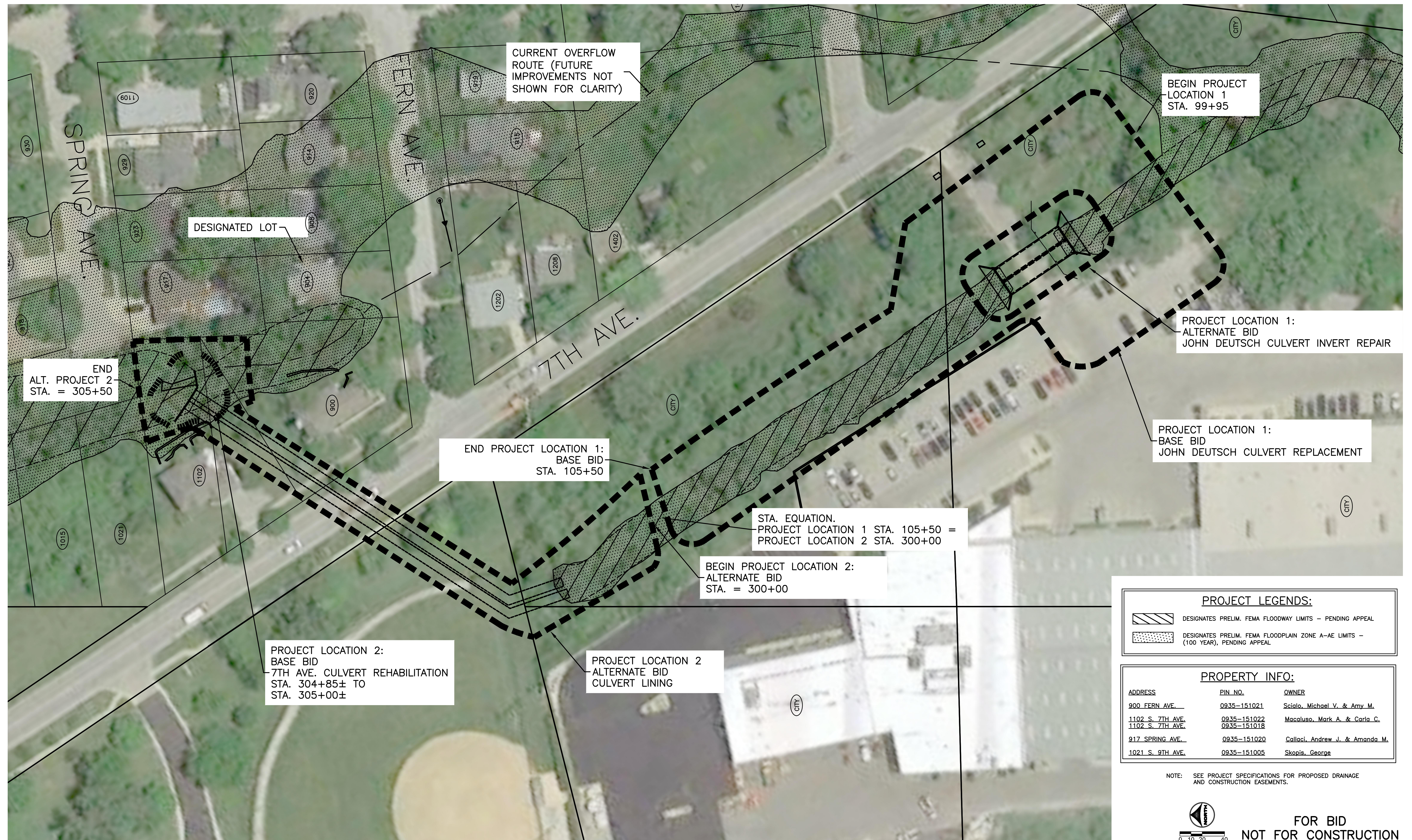
ILLINOIS DESIGN FIRM # 184.001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
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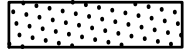
7TH AVENUE CREEK IMPROVEMENTS  
CITY OF ST. CHARLES  
KANE COUNTY, IL

CIVIL – FINAL ENGINEERING  
EROSION CONTROL AND STORMWATER  
POLLUTION PREVENTION PLAN

SHEET NO.  
C-05



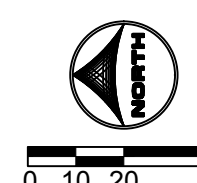


PROJECT LEGENDS:		
	DESIGNATES PRELIM. FEMA FLOODWAY LIMITS - PENDING APPEAL	
	DESIGNATES PRELIM. FEMA FLOODPLAIN ZONE A-AE LIMITS - (100 YEAR), PENDING APPEAL	


  

PROPERTY INFO:		
ADDRESS	PIN NO.	OWNER
<u>900 FERN AVE.</u>	<u>0935-151021</u>	<u>Scialo, Michael V. &amp; Amy M.</u>
<u>1102 S. 7TH AVE.</u>	<u>0935-151022</u>	<u>Macaluso, Mark A. &amp; Carla C.</u>
<u>1102 S. 7TH AVE.</u>	<u>0935-151018</u>	
<u>917 SPRING AVE.</u>	<u>0935-151020</u>	<u>Callaci, Andrew J. &amp; Amanda M.</u>
<u>1021 S. 9TH AVE.</u>	<u>0935-151005</u>	<u>Skopis, George</u>

NOTE: SEE PROJECT SPECIFICATIONS FOR PROPOSED DRAINAGE AND CONSTRUCTION EASEMENTS.



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FAX: 815.385.1781 | [HRGreen.com](http://HRGreen.com)

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

CIVIL — FINAL ENGINEERING  
GENERAL SITE PLAN

SHEET NO.  
C-06



Dial 811 or 1-800-892-0123

JULIE DESIGN TICKET NUMBER # A1861870



Know what's below.  
Call before you dig.

WITH THE FOLLOWING:  
COUNTY KANE COUNTY  
CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP  
SEC. & 1/4 SEC. NO. # 34 & 35-40 N.-8 E.

(2) Working Days before you dig  
(Excluding Sat., Sun. & Holidays)

### SANITARY SEWER TAGS

- PROJECT LOCATION 1
- EXISTING SAN SEWER 27" (RCP) TO REMAIN
  - EXIST. SANITARY MANHOLE, 5' DIA.  
RIM = 719.94  
INV = 697.14 NW (Existing 27" RCP)  
INV = 697.14 SE (Existing 27" RCP)
  - EXISTING SAN SEWER 27" (RCP) TO REMAIN

### WATER TAGS

- PROJECT LOCATION 1
- EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN  
COORDINATE SHUT DOWN OF WATER MAIN, EAST  
ADD 2.5" WHIP FOR FLUSHING AND CHLORINATION
  - EXIST. 8" WATER MAIN D.I.P. - TO REMAIN  
PARTIAL REMOVAL - SEE DEMO PLAN
  - EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN  
COORDINATE SHUT DOWN OF WATER MAIN, WEST  
ADD 1" WHIP FOR FLUSHING AND CHLORINATION
  - EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN  
COORDINATE SHUT DOWN OF WATER MAIN, EAST

### STORM SEWER TAGS

- PROJECT LOCATION 1
- EXIST. SS DI 12" TO REMAIN  
BROKEN END OF PIPE SHALL BE CUT  
BACK TO SOUND PIPE FOR CONNECTION  
TO NEW PIPE (SEE DETAIL ON SHEET C-14)
  - EXISTING CATCH BASIN TO REMAIN  
RIM=720.12
  - EXISTING CATCH BASIN TO REMAIN  
RIM=719.50
  - EXIST. SS RCP 12" TO REMAIN.
  - EXIST. SS FES 12" TO REMAIN.  
INV. = 704.11
  - EXIST. SS FES TO REMAIN.  
PRECAST CONCRETE, 12"  
INV. = 704.10

MATCH LINE SEE SHEET C-08



GATE EQUIPMENT

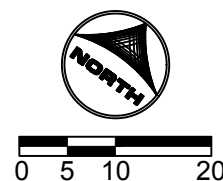


7TH AVE. OVERHEAD UTILITIES



EXIST. JOHN DEUTSCH CULVERTS

EXIST ABANDONED STEEL  
STEEL PIPES TO BE INCLUDED  
WITH REMOVAL OF EXISTING  
STRUCTURES



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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID  
JOHN DEUTSCH DR. - DETAILED EXISTING  
CONDITIONS

SHEET NO.  
C-07



Dial 811 or 1-800-892-0123



Know what's below.  
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WITH THE FOLLOWING:  
COUNTY KANE COUNTY  
CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP  
SEC. & 1/4 SEC. NO. # 34 & 35-40 N.-8 E.

(2) Working Days before you dig  
(Excluding Sat., Sun. & Holidays)



LOOKING AT DOWNSTREAM END  
7TH AVE. CULVERT

#### SANITARY SEWER TAGS

PROJECT LOCATION 2

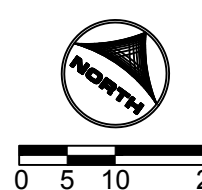
- 30 EXIST. SANITARY MANHOLE, 5' DIA.  
RIM = 714.30  
INV = 691.50 NE (Existing 27" RCP)  
INV = 691.50 SE (Existing 27" RCP)
- 31 EXISTING SAN SEWER 27" (RCP) TO REMAIN  
1.04%(+) SLOPE (EXISTING)
- 32 EXIST. SANITARY MANHOLE, 5' DIA.  
RIM = 723.33  
INV = 706.88 NE (Existing 27" RCP)  
INV = 706.88 NE (Existing 27" RCP)

#### STORM SEWER TAGS

- 7 EXISTING STORM MANHOLE TO REMAIN
- 8 EXIST. SS RCP 12" TO REMAIN.
- PROJECT LOCATION 2
- 30 EXIST. SS FES TO REMAIN.  
PRECAST CONCRETE, 12"  
INV. = 702.27
- 31 EXIST. SS RCP 12" TO REMAIN.
- 32 EXISTING STORM MANHOLE TO REMAIN  
RIM=720.09  
INV= SW 703.49  
INV= NE 714.79



GENERAL CHANNEL DEBRIS  
VIEW OF CHANNEL



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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID  
UPSTREAM OF JOHN DEUTSCH DR. -  
DETAILED EXISTING CONDITIONS

SHEET NO.  
C-08



X:\refs 86140185.06--C--Survey; 86140185.06--xv--Survey; xgl-1-dh01--x; 86140185.06--C--Dgn; 86140185.06--xS--Dgn; 86140185.06--xv--Cis\_Base; 86140185.06--xv--C-Tabulations

LEGEND:

INDICATES CLEARING AND GRUBBING AREA

INDICATES CONSTRUCTION FENCE / LIMITS OF GRADING

INDICATES EROSION CONTROL FENCE  
(SEE SPECIFIED SHEET FOR DETAILS.)

INDICATES COIR LOG  
(SEE SPECIFIED SHEET FOR DETAILS.)

INDICATES EROSION CONTROL MEASURE (SEE SHEET C-05 FOR EROSION CONTROL LEGEND)

INDICATES TREE AND BRUSH REMOVAL (SEE SHEET FOR SIZE AND QUANTITY)

INDICATES TREE TRUNK & ROOT PROTECTION (POTENTIAL ROOT PRUNING REQUIRED) (SEE SHEET EC-03 FOR DETAIL)

INDICATES POTENTIAL STOCKPILE AREA

INDICATES TEMPORARY CONSTRUCTION FENCE

INDICATES INLET FILTER BASKET

INDICATES RIP RAP

NOTES:

- REMOVE AND PROPERLY DISPOSE OF TREES AND DEBRIS

- SEE EXIST. CONDITIONS SHEETS FOR EXIST UTILITY INFORMATION

MATCH LINE SEE SHEET C-10

TREE REMOVAL TABLE		
TREE DIAMETER UNITS, (INCHES)	NO. OF TREES	QUANTITY (UNITS)
6	8	48
8	6	48
10	5	50
12	4	48
14	-	-
SUB-TOTAL UNITS 6 TO 15 =		194
CONTINGENCY AMOUNT =		69
UNITS 6 TO 15 TOTAL =		263
16	3	48
18	1	18
20	2	40
22	-	-
24	7	168
36	1	36
SUB-TOTAL UNITS OVER 15 =		310
CONTINGENCY AMOUNT =		42
UNITS OVER 15 TOTAL =		352

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FAX: 815.385.1781 | HRGreen.com

**PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT AND 7TH AVENUE CULVERT REHABILITATION**  
**CLIENT: CITY OF ST. CHARLES**  
**KANE COUNTY, IL**

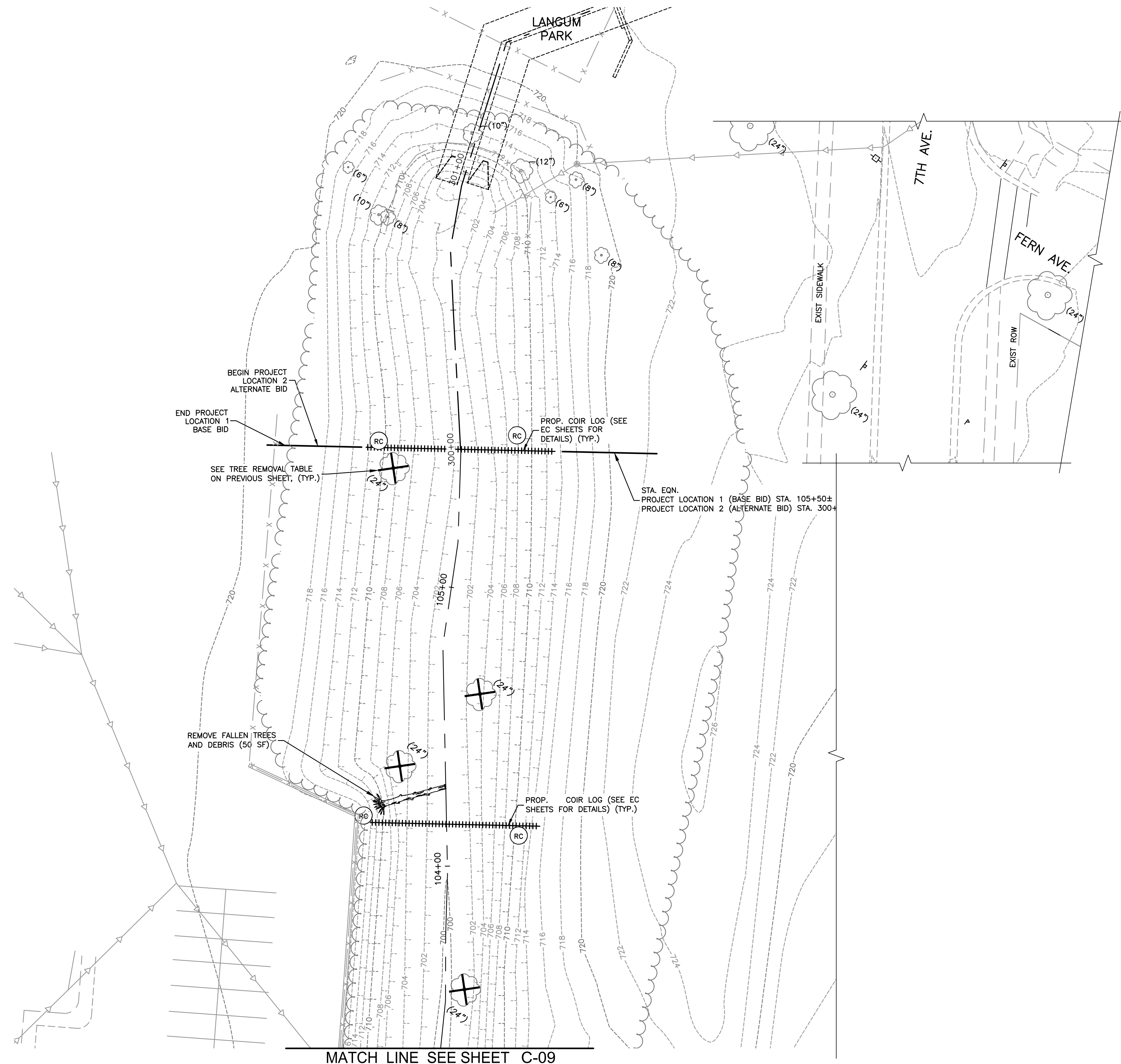
PROJECT LOCATION 1 - BASE BID  
**JOHN DEUTSCH DRIVE - TREE REMOVAL AND EROSION CONTROL PLAN**

SHEET NO.  
**C-09**



NOTES:

- REMOVE AND PROPERLY DISPOSE OF TREES AND DEBRIS
- SEE EXIST. CONDITIONS SHEETS FOR EXIST UTILITY INFORMATION



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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID  
JOHN DEUTSCH DRIVE - TREE REMOVAL AND  
EROSION CONTROL PLAN

SHEET NO.  
—10



X:\ref: 86140185.06--C--Survey; 86140185.06--xl--Survey; xgl-1-dh01--x; 86140185.06--C--Dgn; 86140185.06--xS--Dgn; 86140185.06--xl--Cis\_Base; 86140185.06--xC--Tabulations

### SANITARY SEWER TAGS

- EXISTING SAN SEWER 27" (RCP) TO REMAIN
- EXIST. SANITARY MANHOLE, 5' DIA.  
RIM = 719.94  
INV = 697.14 NW (Existing 27" RCP)  
INV = 697.14 SE (Existing 27" RCP)
- EXISTING SAN SEWER 27" (RCP) TO REMAIN

### STORM SEWER TAGS

- EXIST. SS DI 12" TO REMAIN  
BROKEN END OF PIPE SHALL BE CUT  
BACK TO SOUND PIPE FOR CONNECTION  
TO NEW PIPE (SEE DETAIL ON SHEET C-14)
- EXISTING CATCH BASIN TO REMAIN  
RIM=720.12
- EXISTING CATCH BASIN TO REMAIN  
RIM=719.50
- EXIST. SS RCP 12" TO REMAIN.
- EXIST. SS FES 12" TO REMAIN.  
INV. = 704.11
- EXIST. SS FES TO REMAIN.  
PRECAST CONCRETE, 12"  
INV. = 704.10

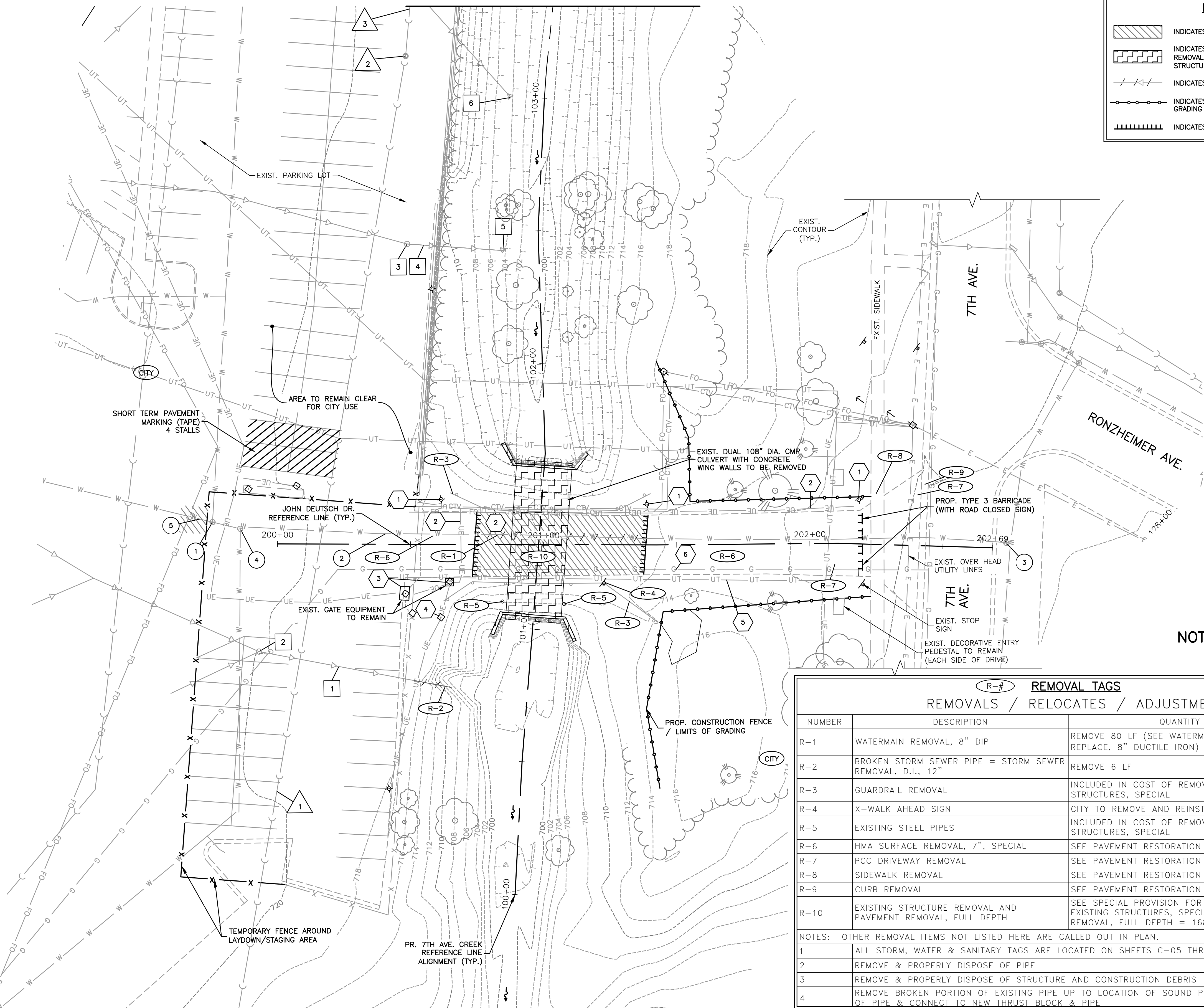
### WATER TAGS

- PROJECT LOCATION 1
- EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN  
COORDINATE SHUT DOWN OF WATER MAIN, EAST  
ADD 2.5" WHIP FOR FLUSHING AND CHLORINATION
  - EXIST. 8" WATER MAIN D.I.P. - TO REMAIN  
PARTIAL REMOVAL - SEE DEMO PLAN
  - EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN  
COORDINATE SHUT DOWN OF WATER MAIN, WEST  
ADD 1" WHIP FOR FLUSHING AND CHLORINATION
  - EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN  
COORDINATE SHUT DOWN OF WATER MAIN, EAST
  - CUT & CAP EXIST. 8" WATER MAIN  
WEST OF VALVE

### KEY NOTES:

- EXISTING LIGHT POLE FOUNDATIONS & POLES TO REMAIN IN PLACE & CONTRACTOR SHALL PROTECT. ELECTRICAL LINES (BURIED) CAN BE DE-ENERGIZED. CONTRACTOR SHALL COORDINATE WITH CITY IF LIGHT POLES ABOVE. FOUNDATION NEED TO BE TEMPORARILY REMOVED, &/OR FOR DE-ENERGIZING BURIED ELECTRICAL, BY THE CITY.
- UNDERGROUND UTILITIES ALONG NORTH SIDE OF JOHN DEUTSCH & CROSSING JOHN DEUTSCH TO REMAIN IN SERVICE. CONTRACTOR SHALL PROTECT AND PROVIDE TEMPORARY SUPPORT OF EXISTING UNDERGROUND AT&T, FIBER OPTIC, COMCAST AND CITY ELECTRICAL CONDUIT AND/OR LINES. COST INCLUDED IN PRECAST CONCRETE BOX CULVERT.
- EXIST. GATE EQUIPMENT TO REMAIN & BE PROTECTED.
- EXIST. ELECTRICAL HAND HOLE TO REMAIN & TO BE PROTECTED.
- EXISTING BURRIED AT&T ALONG SOUTH SIDE OF JOHN DEUTSCH IS UNDERSTOOD TO BE ABANDONED. CONTRACTOR SHALL VERIFY NO LIVE UTILITIES REMAIN IN AT&T CONDUIT ALONG SOUTH SIDE OF JOHN DEUTSCH PRIOR TO EXCAVATION.
- CONTRACTOR SHALL COORDINATE WITH NICOR FOR TEMPORARY DISCONNECT OF 4" GAS MAIN ON SOUTH SIDE OF JOHN DEUTSCH.

MATCH LINE SEE SHEET C-12



### LEGEND:

- INDICATES PAVEMENT REMOVAL, FULL DEPTH
- INDICATES EXISTING CULVERT AND END SECTION REMOVAL (SEE REMOVAL OF EXISTING STRUCTURES, SPECIAL)
- INDICATES STORM SEWER REMOVAL
- INDICATES CONSTRUCTION FENCE / LIMITS OF GRADING
- INDICATES SAWCUT (FULL DEPTH) (INCIDENTAL)

### REMOVAL TAGS REMOVALS / RELOCATES / ADJUSTMENTS

NUMBER	DESCRIPTION	QUANTITY	NOTES
R-1	WATERMAIN REMOVAL, 8" DIP	REMOVE 80 LF (SEE WATERMAIN REMOVE AND REPLACE, 8" DUCTILE IRON)	2
R-2	BROKEN STORM SEWER PIPE = STORM SEWER REMOVAL, D.I., 12"	REMOVE 6 LF	2, 4
R-3	GUARDRAIL REMOVAL	INCLUDED IN COST OF REMOVAL OF EXISTING STRUCTURES, SPECIAL	3
R-4	X-WALK AHEAD SIGN	CITY TO REMOVE AND REINSTALL	
R-5	EXISTING STEEL PIPES	INCLUDED IN COST OF REMOVAL OF EXISTING STRUCTURES, SPECIAL	
R-6	HMA SURFACE REMOVAL, 7", SPECIAL	SEE PAVEMENT RESTORATION PLAN	3
R-7	PCC DRIVEWAY REMOVAL	SEE PAVEMENT RESTORATION PLAN	3
R-8	SIDEWALK REMOVAL	SEE PAVEMENT RESTORATION PLAN	3
R-9	CURB REMOVAL	SEE PAVEMENT RESTORATION PLAN	3
R-10	EXISTING STRUCTURE REMOVAL AND PAVEMENT REMOVAL, FULL DEPTH	SEE SPECIAL PROVISION FOR REMOVAL OF EXISTING STRUCTURES, SPECIAL. PAVEMENT REMOVAL, FULL DEPTH = 168 SQ. YD.	3

- NOTES: OTHER REMOVAL ITEMS NOT LISTED HERE ARE CALLED OUT IN PLAN.
- ALL STORM, WATER & SANITARY TAGS ARE LOCATED ON SHEETS C-05 THRU C-12
  - REMOVE & PROPERLY DISPOSE OF PIPE
  - REMOVE & PROPERLY DISPOSE OF STRUCTURE AND CONSTRUCTION DEBRIS
  - REMOVE BROKEN PORTION OF EXISTING PIPE UP TO LOCATION OF SOUND PIPE. LEAVE IN PLACE REMAINDER OF PIPE & CONNECT TO NEW THRUST BLOCK & PIPE

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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID  
JOHN DEUTSCH DRIVE -  
DETAILED DEMOLITION PLAN

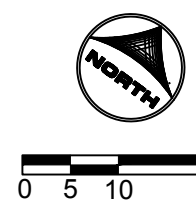
SHEET NO.  
C-11



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#	SANITARY SEWER TAGS
PROJECT LOCATION 2	
30	EXIST. SANITARY MANHOLE, 5' DIA. RIM = 714.30 INV = 691.50 NE (Existing 27" RCP) INV = 691.50 SE (Existing 27" RCP)
31	EXISTING SAN SEWER 27" (RCP) TO REMAIN 1.04%(+) SLOPE (EXISTING)
32	EXIST. SANITARY MANHOLE, 5' DIA. RIM = 723.33 INV = 706.88 NE (Existing 27" RCP) INV = 706.88 NE (Existing 27" RCP)


#	STORM SEWER TAGS
7	EXISTING STORM MANHOLE TO REMAIN
8	EXIST. SS RCP 12" TO REMAIN. PROJECT LOCATION 2
30	EXIST. SS FES TO REMAIN. PRECAST CONCRETE, 12" INV. = 702.27
31	EXIST. SS RCP 12" TO REMAIN.
32	EXISTING STORM MANHOLE TO REMAIN RIM=720.09 INV= SW 703.49 INV= NE 714.79
33	EXISTING STORM MANHOLE TO REMAIN RIM=721.62



FOR BID  
NOT FOR CONSTRUCTION

DRAWN BY: MPL	JOB DATE: 10/27/2017	BAR IS ONE INCH ON OFFICIAL DRAWINGS: 0" = 1"
APPROVED: AJ	JOB NUMBER: 86140185.06	IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.
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NO.	DATE	BY	REVISION DESCRIPTION



ILLINOIS DESIGN FIRM # 184-001322  
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McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
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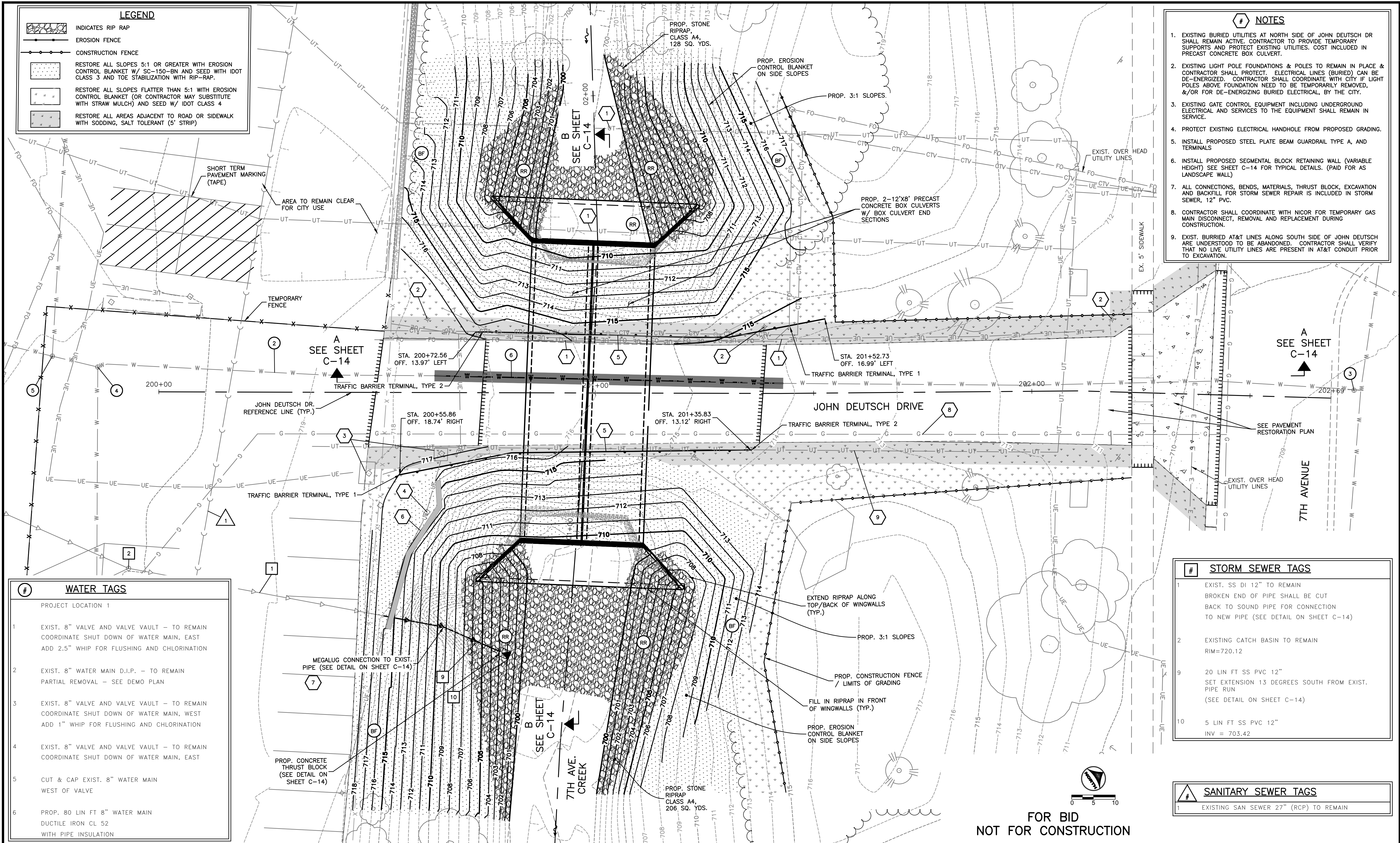
**PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION**  
**CLIENT: CITY OF ST. CHARLES**  
**KANE COUNTY, IL**

PROJECT LOCATION 1 – BASE BID  
**UPSTREAM OF JOHN DEUTSCH DRIVE –  
DETAILED DEMOLITION PLAN**

SHEET NO.  
**C-12**



Xref: 86140185.06--C-Grading; 86140185.06--v-Survey; xgt-1-dh01--x; 86140185.06--C-Prof; 86140185.06--C-Dgn; 86140185.06--xS-Dgn; 86140185.06--x-C-Tabulations



LEGEND	
	INDICATES RIP RAP
	EROSION FENCE
	CONSTRUCTION FENCE
	RESTORE ALL SLOPES 5:1 OR GREATER WITH EROSION CONTROL BLANKET W/ SC-150-BN AND SEED WITH IDOT CLASS 3 AND TOE STABILIZATION WITH RIP-RAP.
	RESTORE ALL SLOPES FLATTER THAN 5:1 WITH EROSION CONTROL BLANKET (OR CONTRACTOR MAY SUBSTITUTE WITH STRAW MULCH) AND SEED W/ IDOT CLASS 4
	RESTORE ALL AREAS ADJACENT TO ROAD OR SIDEWALK WITH SODDING, SALT TOLERANT (5' STRIP)

#	NOTES
1.	EXISTING BURIED UTILITIES AT NORTH SIDE OF JOHN DEUTSCH DR SHALL REMAIN ACTIVE. CONTRACTOR TO PROVIDE TEMPORARY SUPPORTS AND PROTECT EXISTING UTILITIES. COST INCLUDED IN PRECAST CONCRETE BOX CULVERT.
2.	EXISTING LIGHT POLE FOUNDATIONS & POLES TO REMAIN IN PLACE & CONTRACTOR SHALL PROTECT. ELECTRICAL LINES (BURIED) CAN BE DE-ENERGIZED. CONTRACTOR SHALL COORDINATE WITH CITY IF LIGHT POLES ABOVE FOUNDATION NEED TO BE TEMPORARILY REMOVED, &/OR FOR DE-ENERGIZING BURIED ELECTRICAL, BY THE CITY.
3.	EXISTING GATE CONTROL EQUIPMENT INCLUDING UNDERGROUND ELECTRICAL AND SERVICES TO THE EQUIPMENT SHALL REMAIN IN SERVICE.
4.	PROTECT EXISTING ELECTRICAL HANDHOLE FROM PROPOSED GRADING.
5.	INSTALL PROPOSED STEEL PLATE BEAM GUARDRAIL TYPE A, AND TERMINALS
6.	INSTALL PROPOSED SEGMENTAL BLOCK RETAINING WALL (VARIABLE HEIGHT) SEE SHEET C-14 FOR TYPICAL DETAILS. (PAID FOR AS LANDSCAPE WALL)
7.	ALL CONNECTIONS, BENDS, MATERIALS, THRUST BLOCK, EXCAVATION AND BACKFILL FOR STORM SEWER REPAIR IS INCLUDED IN STORM SEWER, 12" PVC.
8.	CONTRACTOR SHALL COORDINATE WITH NICOR FOR TEMPORARY GAS MAIN DISCONNECT, REMOVAL AND REPLACEMENT DURING CONSTRUCTION.
9.	EXIST. BURIED AT&T LINES ALONG SOUTH SIDE OF JOHN DEUTSCH ARE UNDERSTOOD TO BE ABANDONED. CONTRACTOR SHALL VERIFY THAT NO LIVE UTILITY LINES ARE PRESENT IN AT&T CONDUIT PRIOR TO EXCAVATION.

#	WATER TAGS
PROJECT LOCATION 1	
1	EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN COORDINATE SHUT DOWN OF WATER MAIN, EAST ADD 2.5" WHIP FOR FLUSHING AND CHLORINATION
2	EXIST. 8" WATER MAIN D.I.P. - TO REMAIN PARTIAL REMOVAL - SEE DEMO PLAN
3	EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN COORDINATE SHUT DOWN OF WATER MAIN, WEST ADD 1" WHIP FOR FLUSHING AND CHLORINATION
4	EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN COORDINATE SHUT DOWN OF WATER MAIN, EAST
5	CUT & CAP EXIST. 8" WATER MAIN WEST OF VALVE
6	PROP. 80 LIN FT 8" WATER MAIN DUCTILE IRON CL 52 WITH PIPE INSULATION

#	STORM SEWER TAGS
1	EXIST. SS DI 12" TO REMAIN BROKEN END OF PIPE SHALL BE CUT BACK TO SOUND PIPE FOR CONNECTION TO NEW PIPE (SEE DETAIL ON SHEET C-14)
2	EXISTING CATCH BASIN TO REMAIN RIM=720.12
9	20 LIN FT SS PVC 12" SET EXTENSION 13 DEGREES SOUTH FROM EXIST. PIPE RUN (SEE DETAIL ON SHEET C-14)
10	5 LIN FT SS PVC 12" INV = 703.42

#	SANITARY SEWER TAGS
1	EXISTING SAN SEWER 27" (RCP) TO REMAIN

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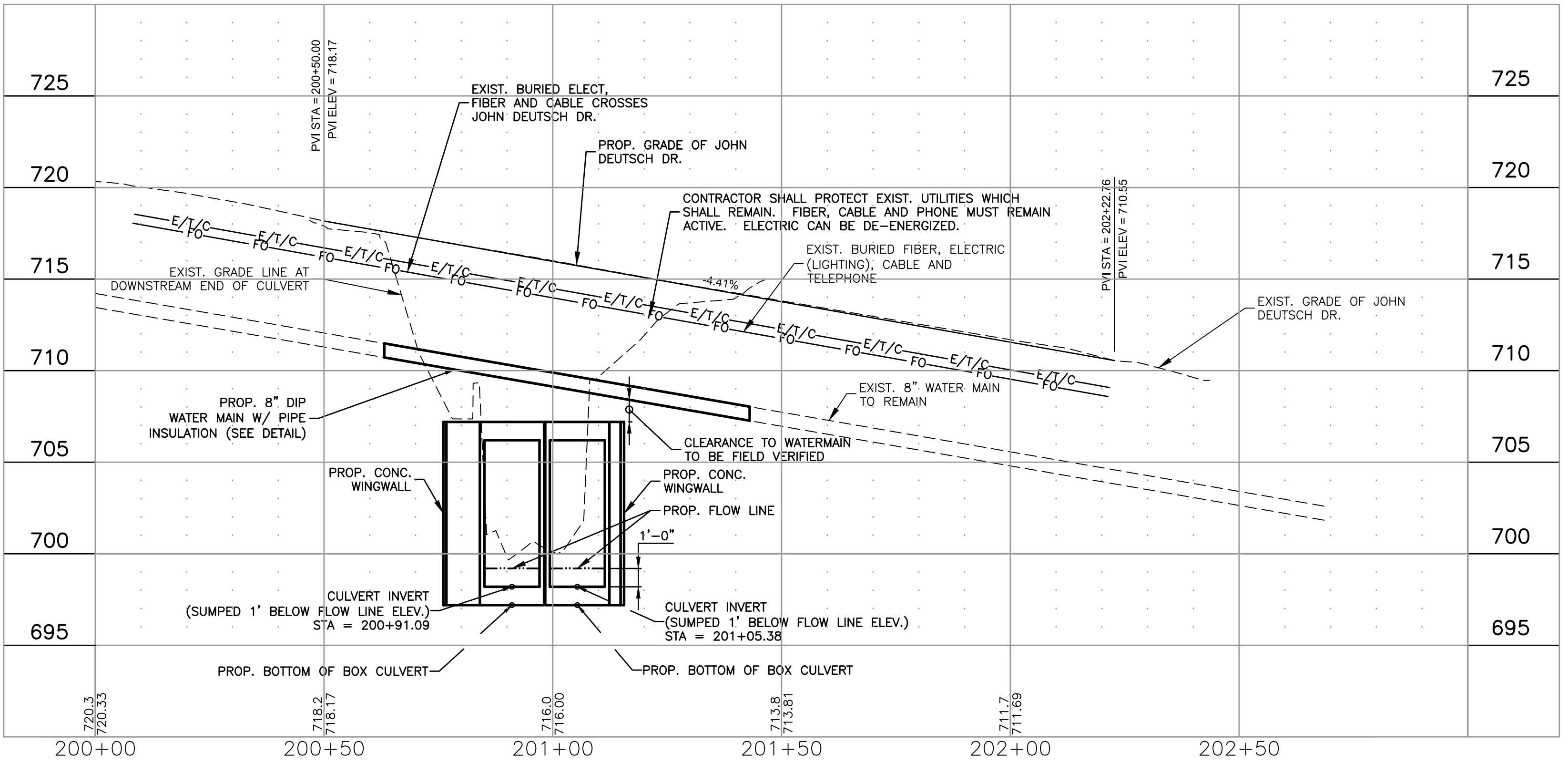
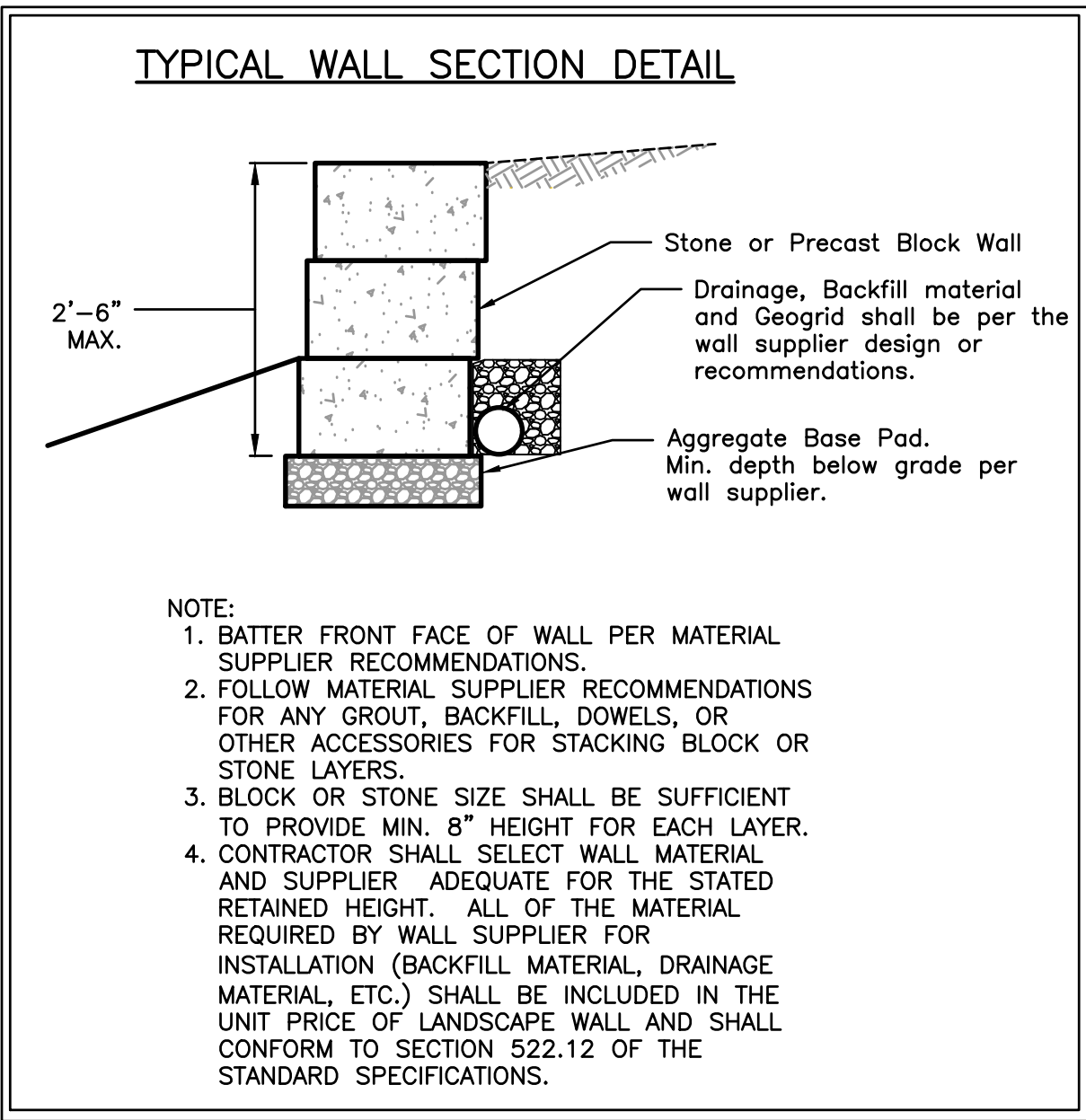
ILLINOIS DESIGN FIRM # 184-001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

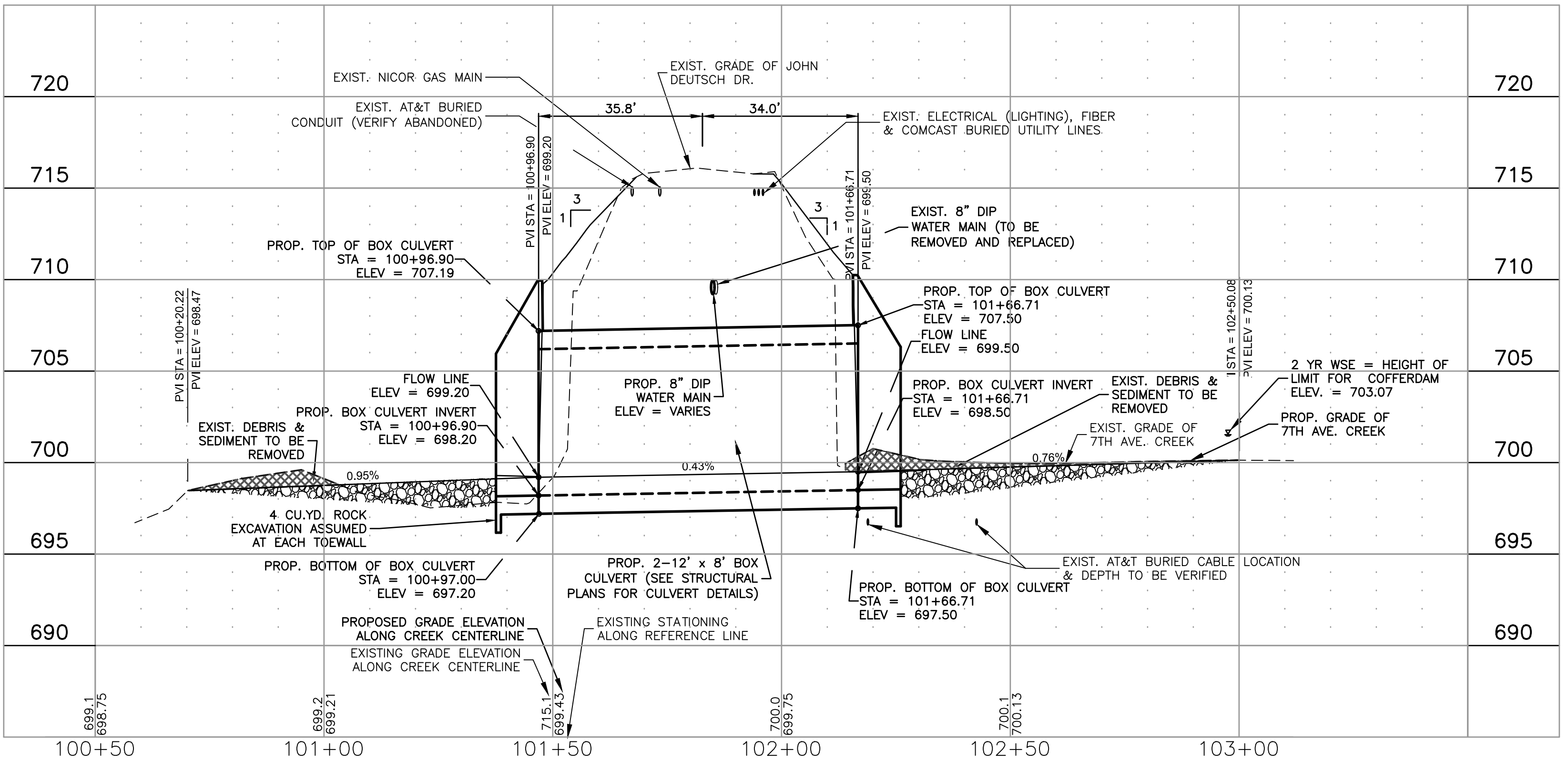
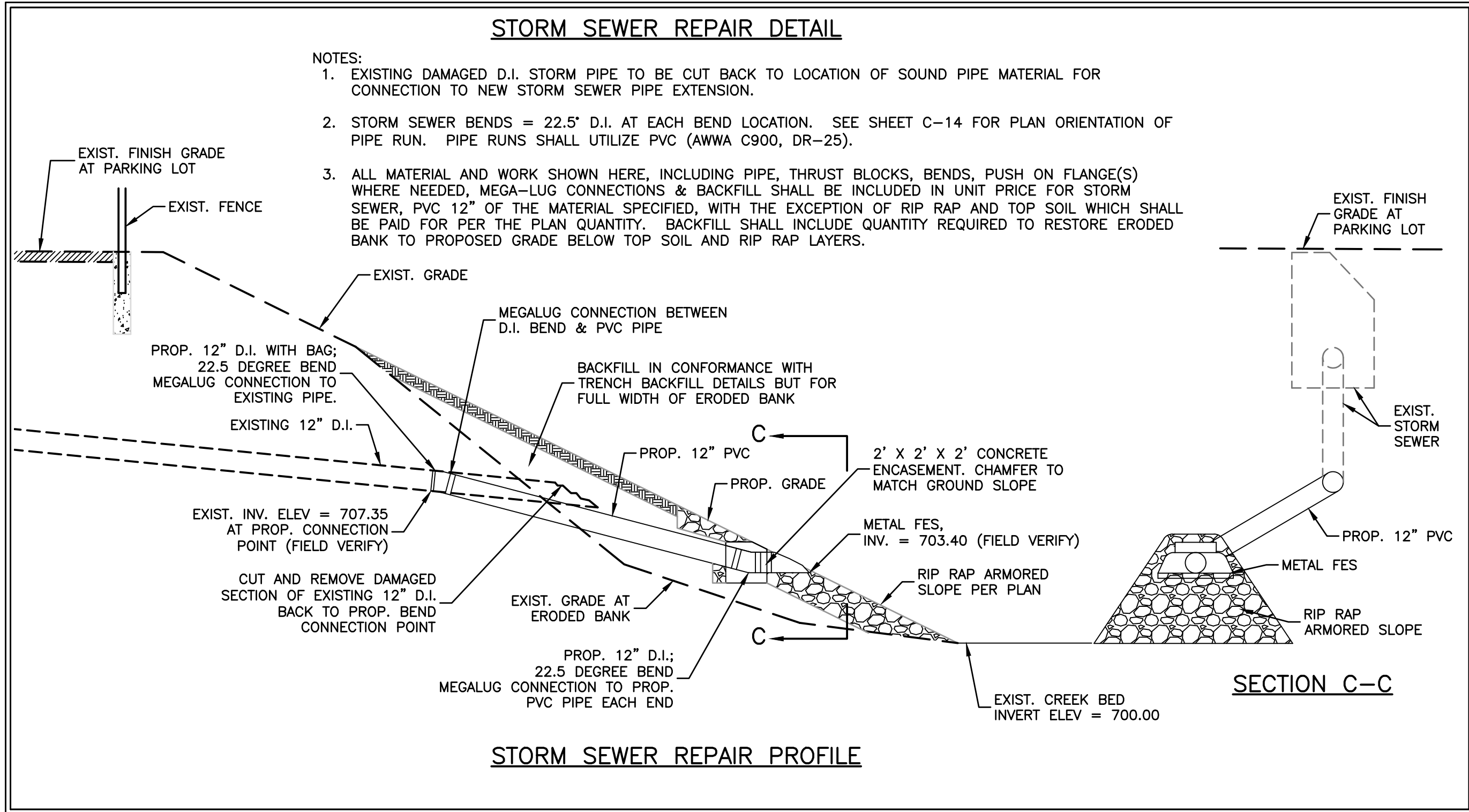
PROJECT LOCATION 1 - BASE BID  
JOHN DEUTSCH DRIVE - PROP. GRADING,  
UTILITY & RESTORATION PLAN

SHEET NO.  
C-13





SECTION A-A



SECTION B-B

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APPROVED: AJ JOB NUMBER: 86140185.06  
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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID  
JOHN DEUTSCH DRIVE - CULVERT AND  
ROADWAY SECTIONS

SHEET NO.  
C-14

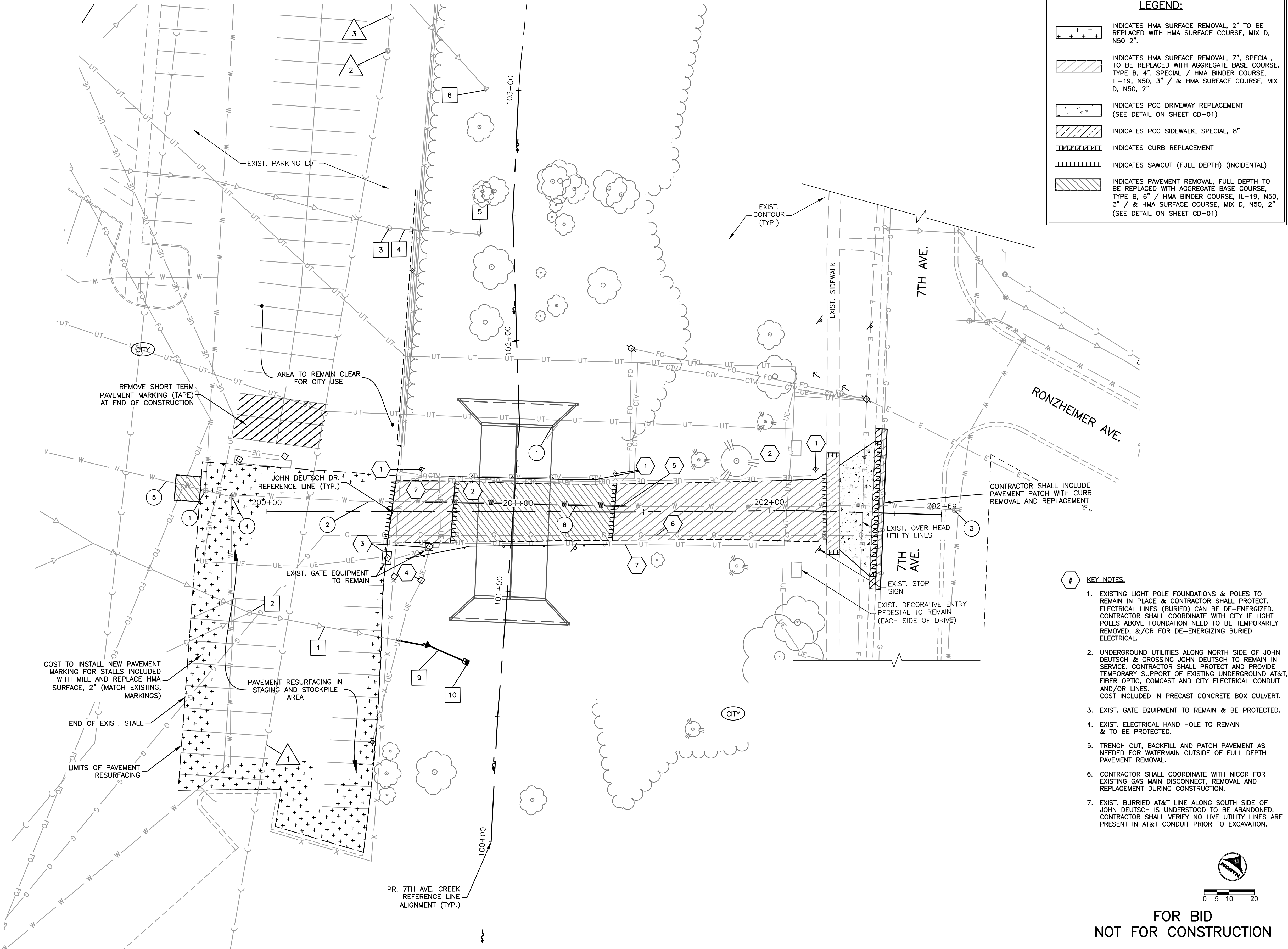


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#	SANITARY SEWER TAGS
1	EXISTING SAN SEWER 27" (RCP) TO REMAIN
2	EXIST. SANITARY MANHOLE, 5' DIA. RIM = 719.94 INV = 697.14 NW (Existing 27" RCP) INV = 697.14 SE (Existing 27" RCP)
3	EXISTING SAN SEWER 27" (RCP) TO REMAIN

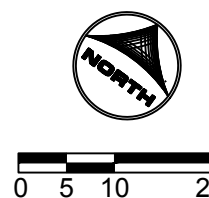
#	STORM SEWER TAGS
1	EXIST. SS DI 12" TO REMAIN BROKEN END OF PIPE SHALL BE CUT BACK TO SOUND PIPE FOR CONNECTION TO NEW PIPE (SEE DETAIL ON SHEET C-14)
2	EXISTING CATCH BASIN TO REMAIN RIM=720.12
3	EXISTING CATCH BASIN TO REMAIN RIM=719.50
4	EXIST. SS RCP 12" TO REMAIN.
5	EXIST. SS FES 12" TO REMAIN. INV. = 704.11
6	EXIST. SS FES TO REMAIN. PRECAST CONCRETE, 12" INV. = 704.10
7	EXISTING STORM MANHOLE TO REMAIN
8	EXIST. SS RCP 12" TO REMAIN.
9	20 LIN FT SS PVC 12" SET EXTENSION 13 DEGREES SOUTH FROM EXIST. PIPE RUN (SEE DETAIL ON SHEET C-14)
10	5 LIN FT SS PVC 12" INV = 703.42
11	PROP. METAL FES, 12"

#	WATER TAGS
	PROJECT LOCATION 1
1	EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN COORDINATE SHUT DOWN OF WATER MAIN, EAST ADD 2.5" WHIP FOR FLUSHING AND CHLORINATION
2	EXIST. 8" WATER MAIN D.I.P. - TO REMAIN PARTIAL REMOVAL - SEE DEMO PLAN
3	EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN COORDINATE SHUT DOWN OF WATER MAIN, WEST ADD 1" WHIP FOR FLUSHING AND CHLORINATION
4	EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN COORDINATE SHUT DOWN OF WATER MAIN, EAST
5	CUT & CAP EXIST. 8" WATER MAIN WEST OF VALVE
6	PROP. 80 LIN FT 8" WATER MAIN DUCTILE IRON CL 52 WITH PIPE INSULATION



LEGEND:	
	INDICATES HMA SURFACE REMOVAL, 2" TO BE REPLACED WITH HMA SURFACE COURSE, MIX D, N50 2".
	INDICATES HMA SURFACE REMOVAL, 7", SPECIAL, TO BE REPLACED WITH AGGREGATE BASE COURSE, TYPE B, 4", SPECIAL / HMA BINDER COURSE, IL-19, N50, 3" / & HMA SURFACE COURSE, MIX D, N50, 2".
	INDICATES PCC DRIVEWAY REPLACEMENT (SEE DETAIL ON SHEET CD-01)
	INDICATES PCC SIDEWALK, SPECIAL, 8"
	INDICATES CURB REPLACEMENT
	INDICATES SAWCUT (FULL DEPTH) (INCIDENTAL)
	INDICATES PAVEMENT REMOVAL, FULL DEPTH TO BE REPLACED WITH AGGREGATE BASE COURSE, TYPE B, 6" / HMA BINDER COURSE, IL-19, N50, 3" / & HMA SURFACE COURSE, MIX D, N50, 2" (SEE DETAIL ON SHEET CD-01)

- KEY NOTES:**
- EXISTING LIGHT POLE FOUNDATIONS & POLES TO REMAIN IN PLACE & CONTRACTOR SHALL PROTECT. ELECTRICAL LINES (BURIED) CAN BE DE-ENERGIZED. CONTRACTOR SHALL COORDINATE WITH CITY IF LIGHT POLES ABOVE FOUNDATION NEED TO BE TEMPORARILY REMOVED, &/OR FOR DE-ENERGIZING BURIED ELECTRICAL.
  - UNDERGROUND UTILITIES ALONG NORTH SIDE OF JOHN DEUTSCH & CROSSING JOHN DEUTSCH TO REMAIN IN SERVICE. CONTRACTOR SHALL PROTECT AND PROVIDE TEMPORARY SUPPORT OF EXISTING UNDERGROUND AT&T, FIBER OPTIC, COMCAST AND CITY ELECTRICAL CONDUIT AND/OR LINES. COST INCLUDED IN PRECAST CONCRETE BOX CULVERT.
  - EXIST. GATE EQUIPMENT TO REMAIN & BE PROTECTED.
  - EXIST. ELECTRICAL HAND HOLE TO REMAIN & TO BE PROTECTED.
  - TRENCH CUT, BACKFILL AND PATCH PAVEMENT AS NEEDED FOR WATERMAIN OUTSIDE OF FULL DEPTH PAVEMENT REMOVAL.
  - CONTRACTOR SHALL COORDINATE WITH NICOR FOR EXISTING GAS MAIN DISCONNECT, REMOVAL AND REPLACEMENT DURING CONSTRUCTION.
  - EXIST. BURIED AT&T LINE ALONG SOUTH SIDE OF JOHN DEUTSCH IS UNDERSTOOD TO BE ABANDONED. CONTRACTOR SHALL VERIFY NO LIVE UTILITY LINES ARE PRESENT IN AT&T CONDUIT PRIOR TO EXCAVATION.



FOR BID  
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APPROVED: AJ JOB NUMBER: 86140185.06  
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**HRGreen**  
ILLINOIS DESIGN FIRM # 184-001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
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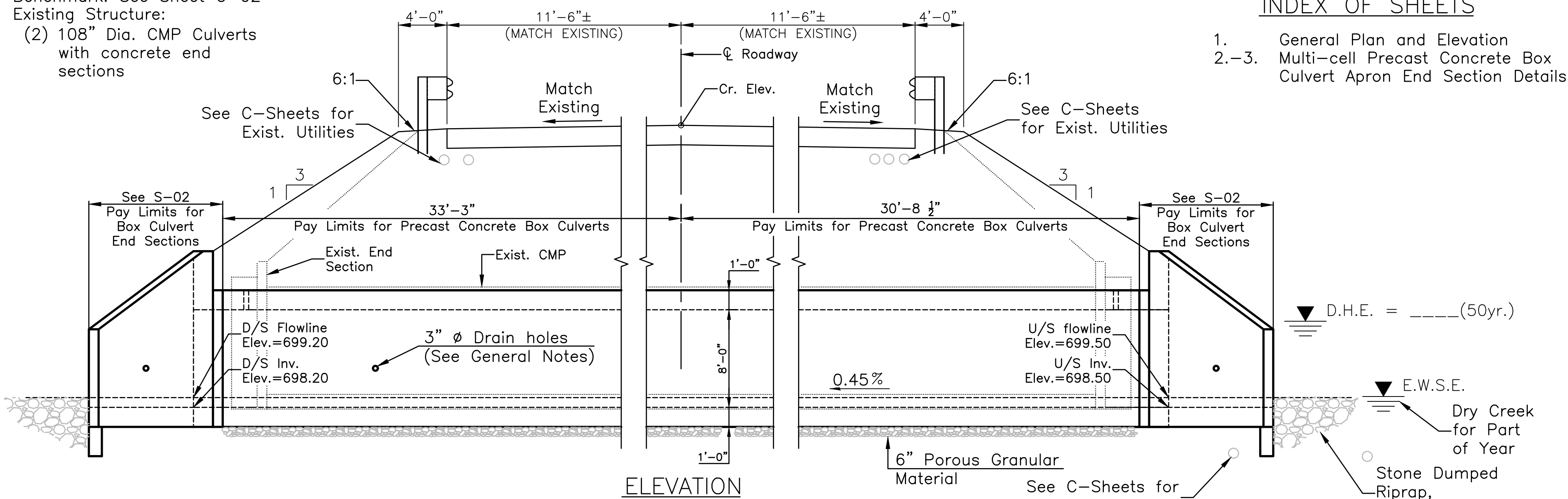
**PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION**  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID  
**JOHN DEUTSCH DRIVE -  
PAVEMENT RESTORATION PLAN**

SHEET NO.  
**C-15**



Benchmark: See Sheet C-02  
Existing Structure:  
(2) 108" Dia. CMP Culverts  
with concrete end  
sections



## INDEX OF SHEETS

1. General Plan and Elevation
- 2.-3. Multi-cell Precast Concrete Box Culvert Apron End Section Details

## GENERAL NOTES

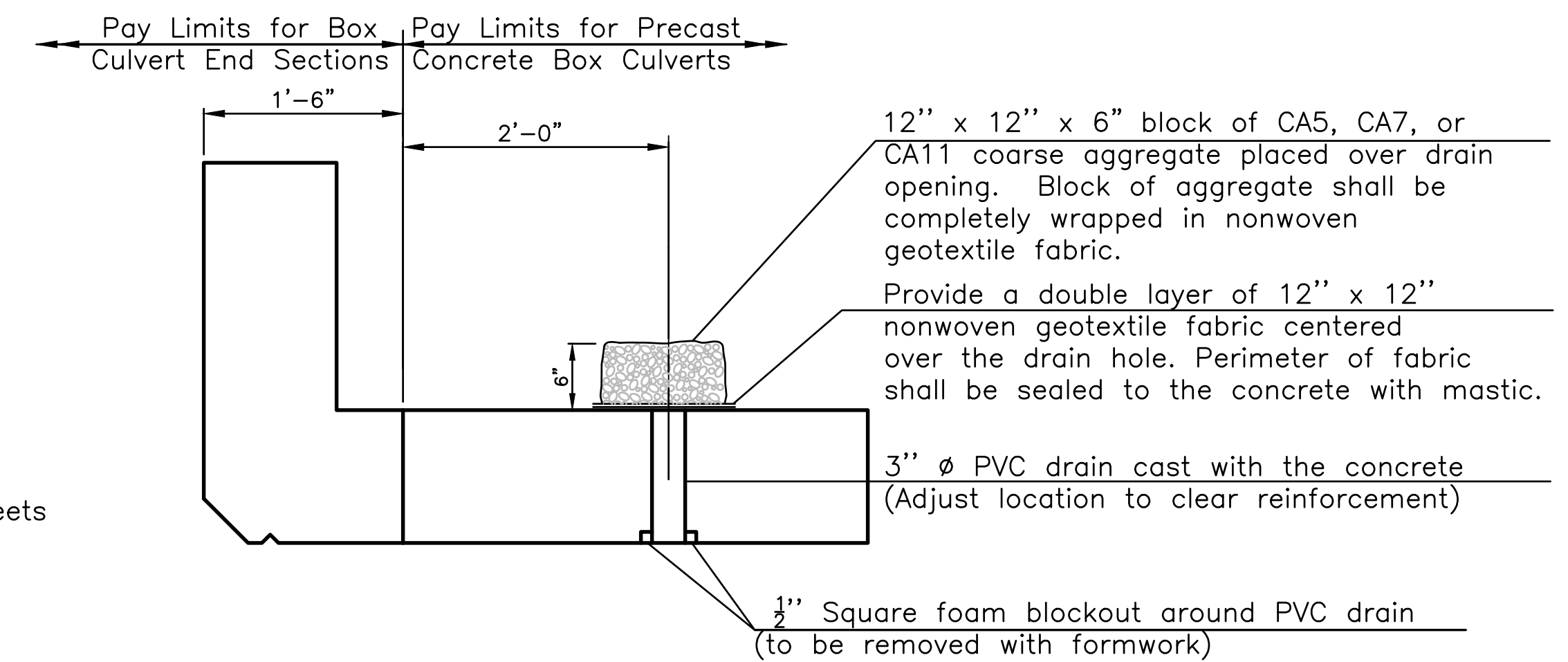
The design fill height for this box is 8' to 10' ft. The precast box culvert sections shall conform to the requirements of ASTM C 1577.

Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within lower 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment below the top of the box culvert extending to a vertical plane 2 ft from the exterior sides of the culvert, 2 ft from the back face of the end sections, and not closer than 2 ft from the face of embankment.

Structural Excavation, Porous Granular Embankment, Earth Excavation, Stockpile and Backfill shall be included in the unit price for Box Culvert End Sections and Precast Concrete Box Culvert.



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated structure.)

PROFILE GRADE

## DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications  
7th Edition with 2015 interims

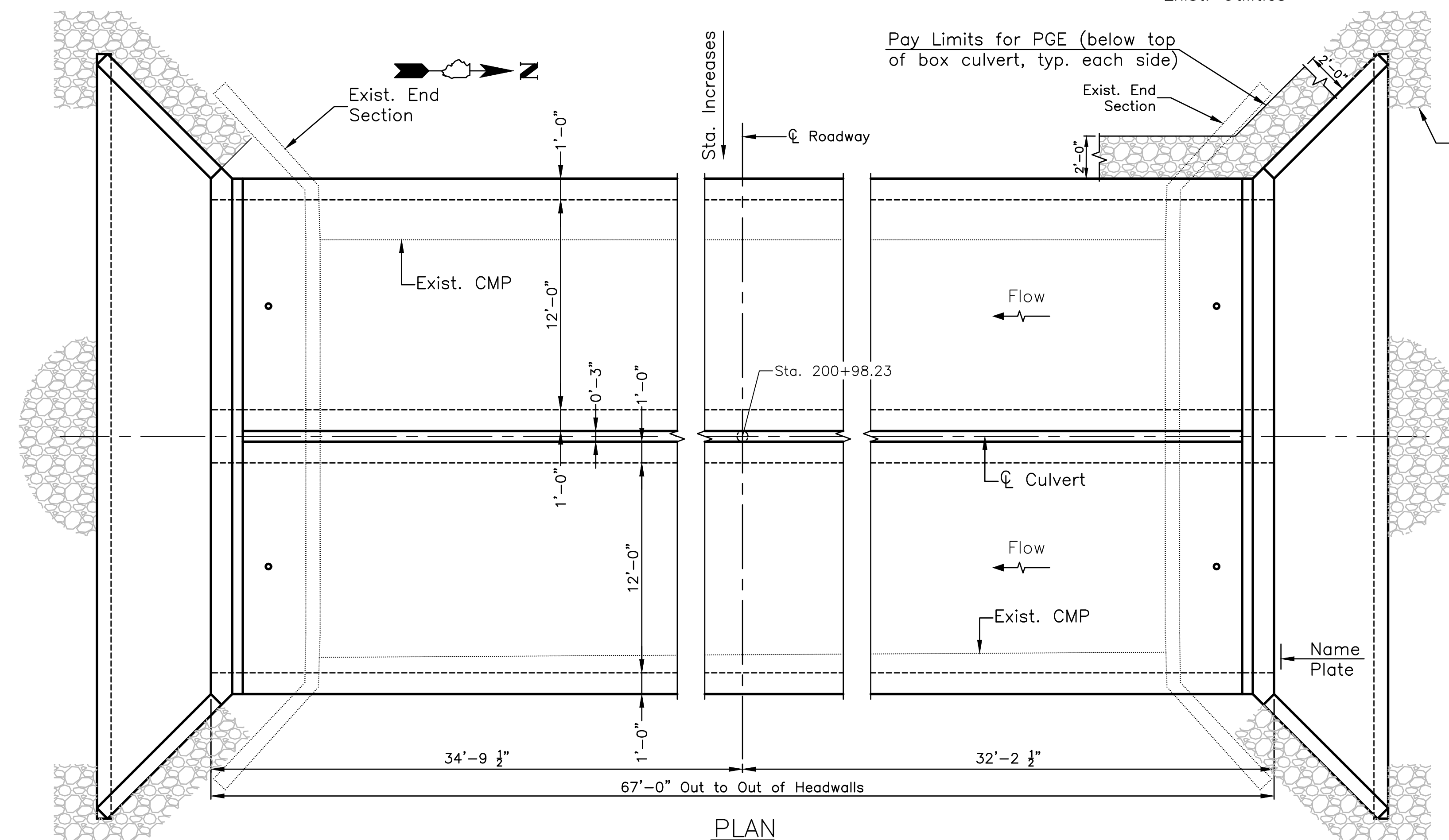
## LOADING HL-93

## DESIGN STRESSES

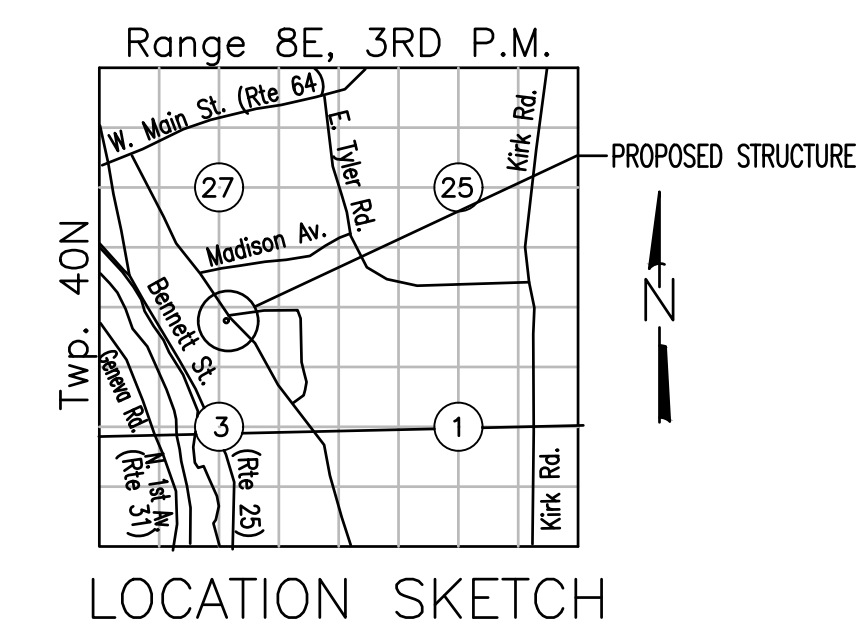
PRECAST UNITS

$f'_c = 5,000$  psi  
 $f_y = 65,000$  psi (Welded Wire Reinforcement)

FIELD UNITS

$$\begin{aligned} f'_c &= 3,500 \text{ psi} \\ f_y &= 6,000 \text{ psi} \end{aligned}$$


NAME PLATE  
See Std. 515001



GENERAL PLAN AND ELEVATION  
JOHN DEUTSCH DRIVE  
OVER 7TH AVENUE CREEK  
KANE COUNTY

FOR BID  
NOT FOR CONSTRUCTION

ITEM	UNIT	TOTAL
Removal of Existing Structures	L Sum.	1
Name Plates	Each	1
Box Culvert End Sections	Each	2
Precast Concrete Box Culverts, 12'X8'	Foot	128

NO.	DATE	BY	REVISION DESCRIPTION



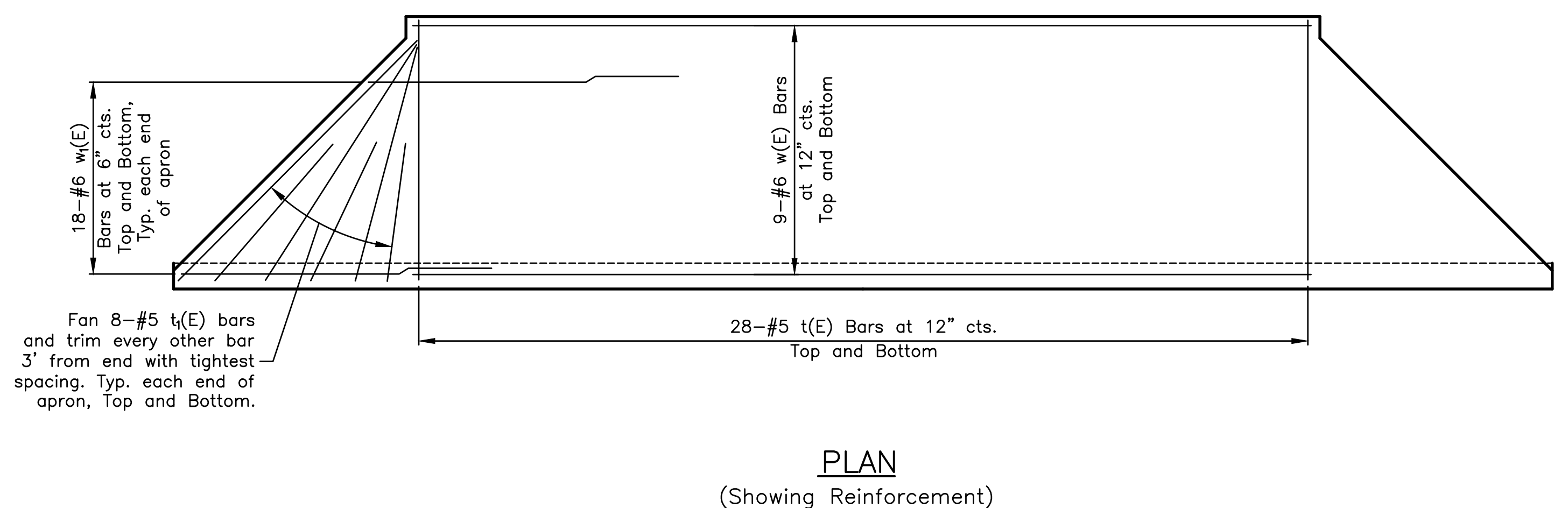
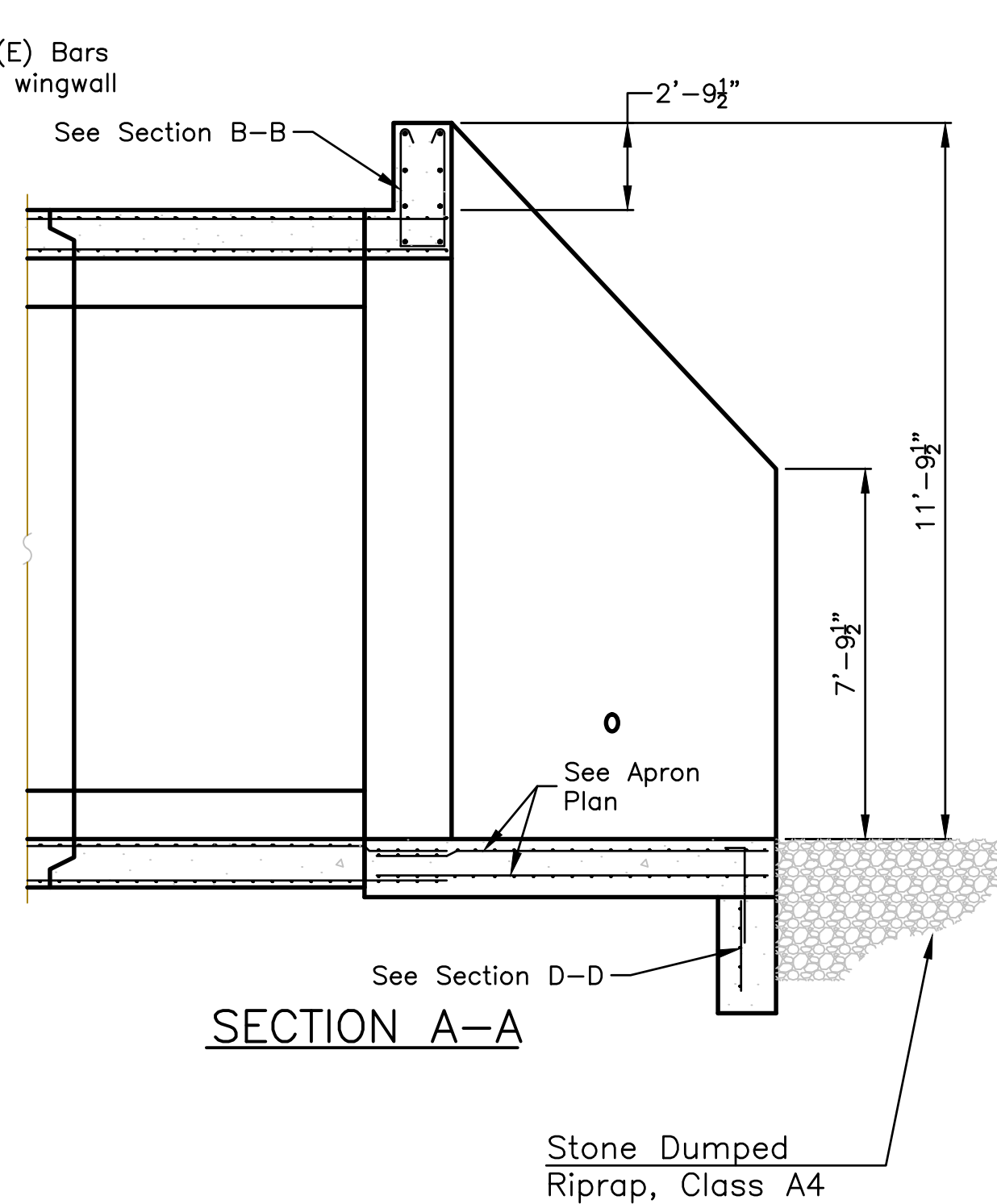
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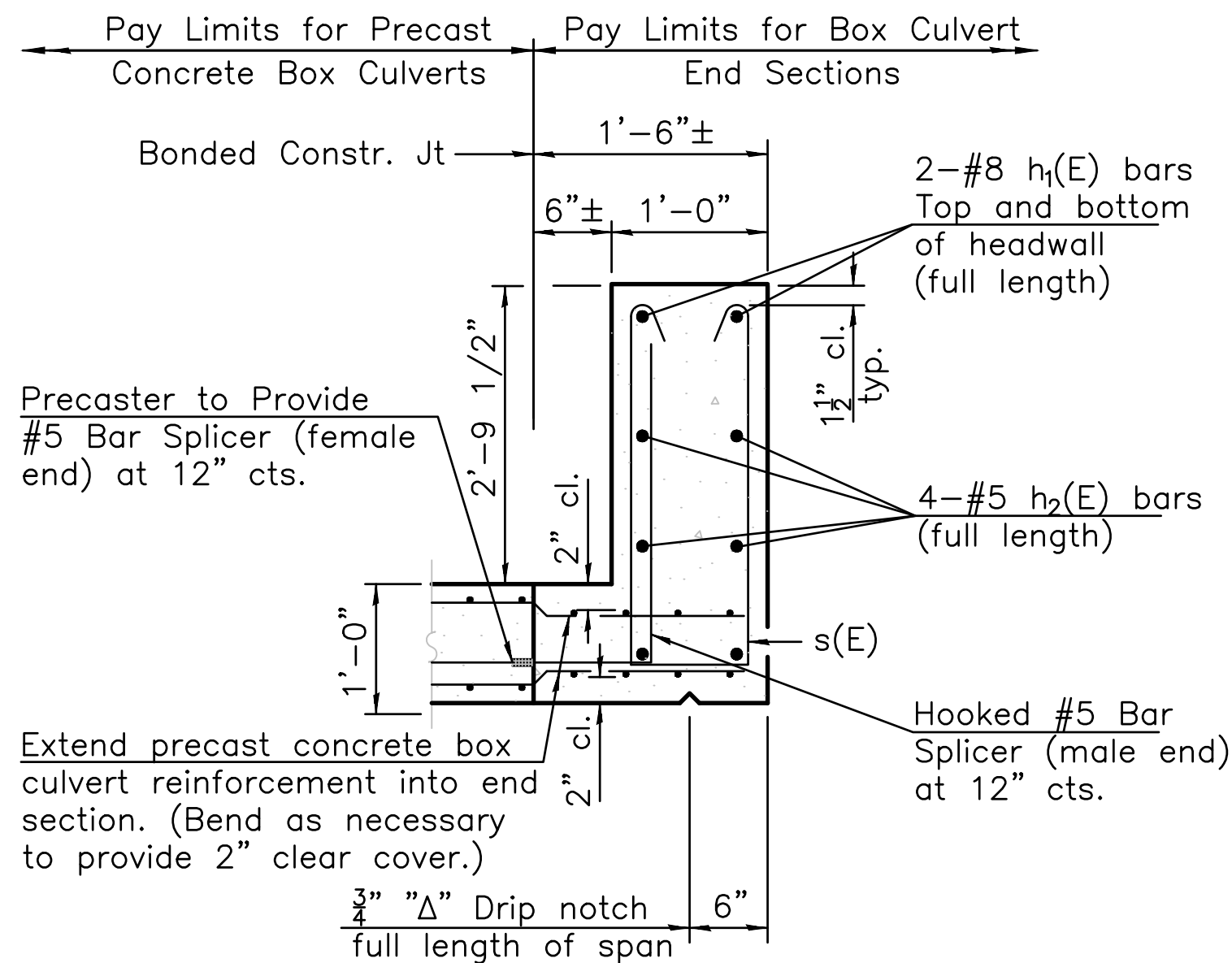
STRUCTURAL - PROJECT LOCATION 1 - BASE BID  
JOHN DEUTSCH - DOUBLE BOX CULVERT  
GENERAL PLAN AND ELEVATION

SHEET NO.  
S-01

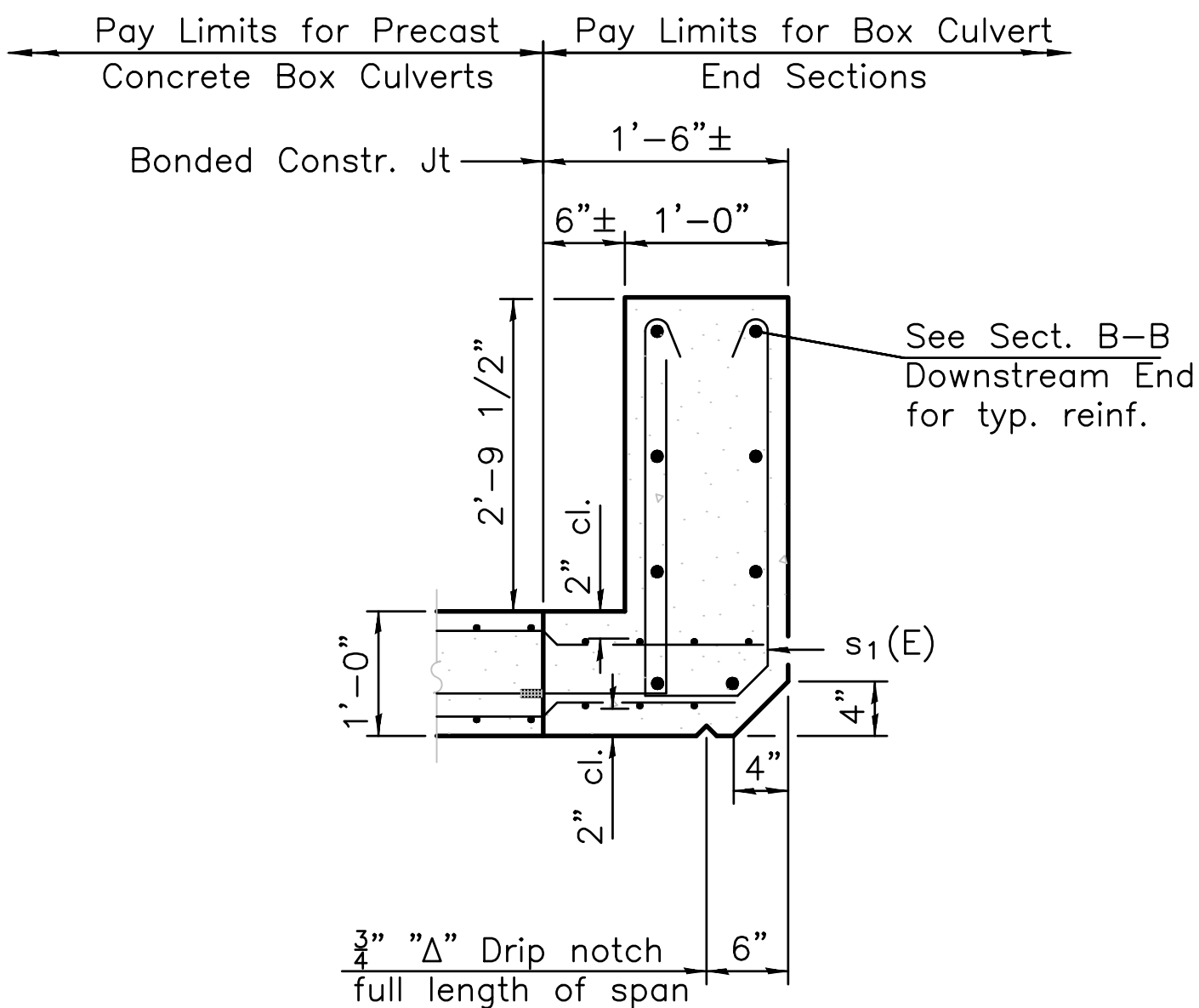




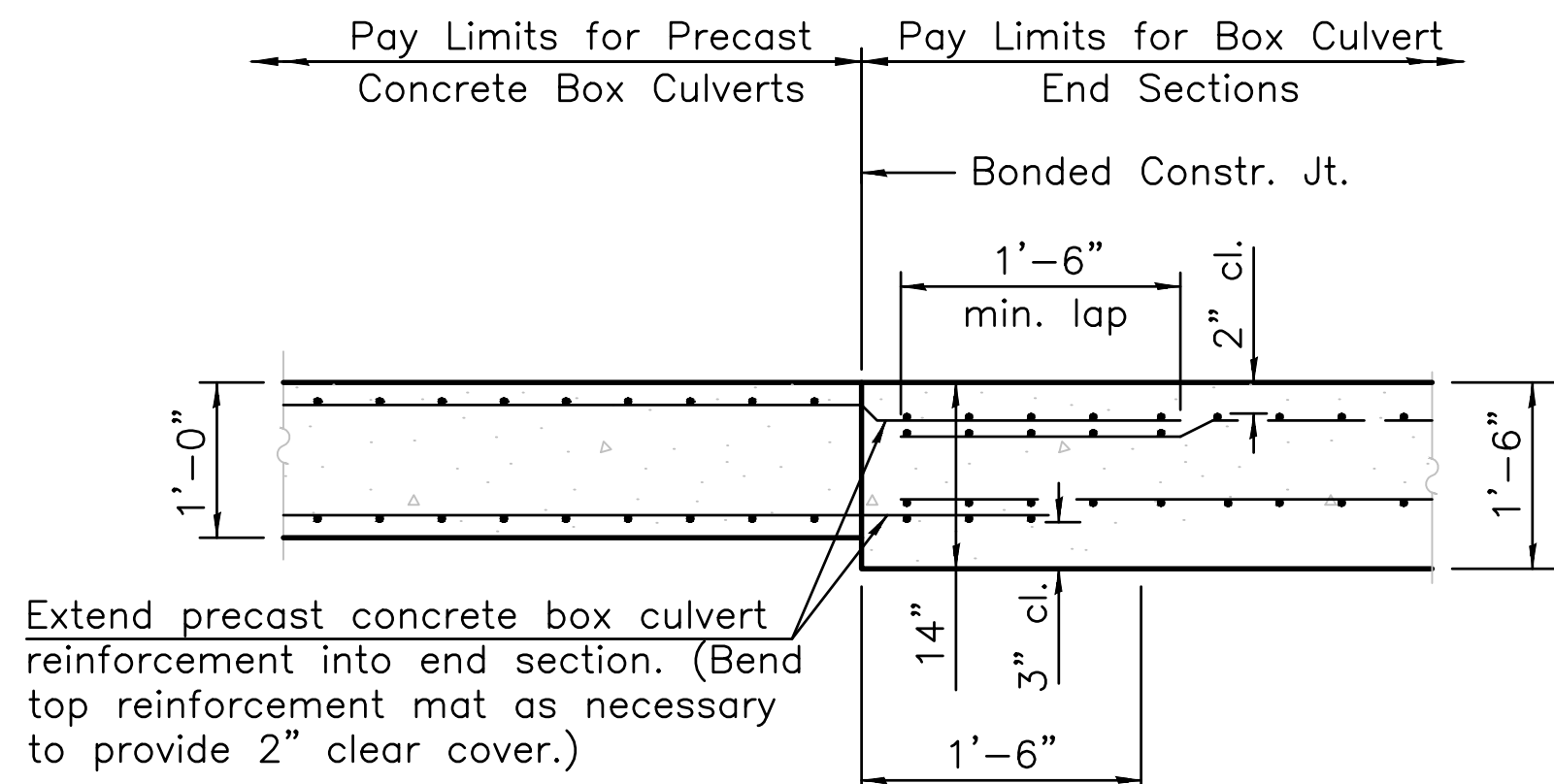




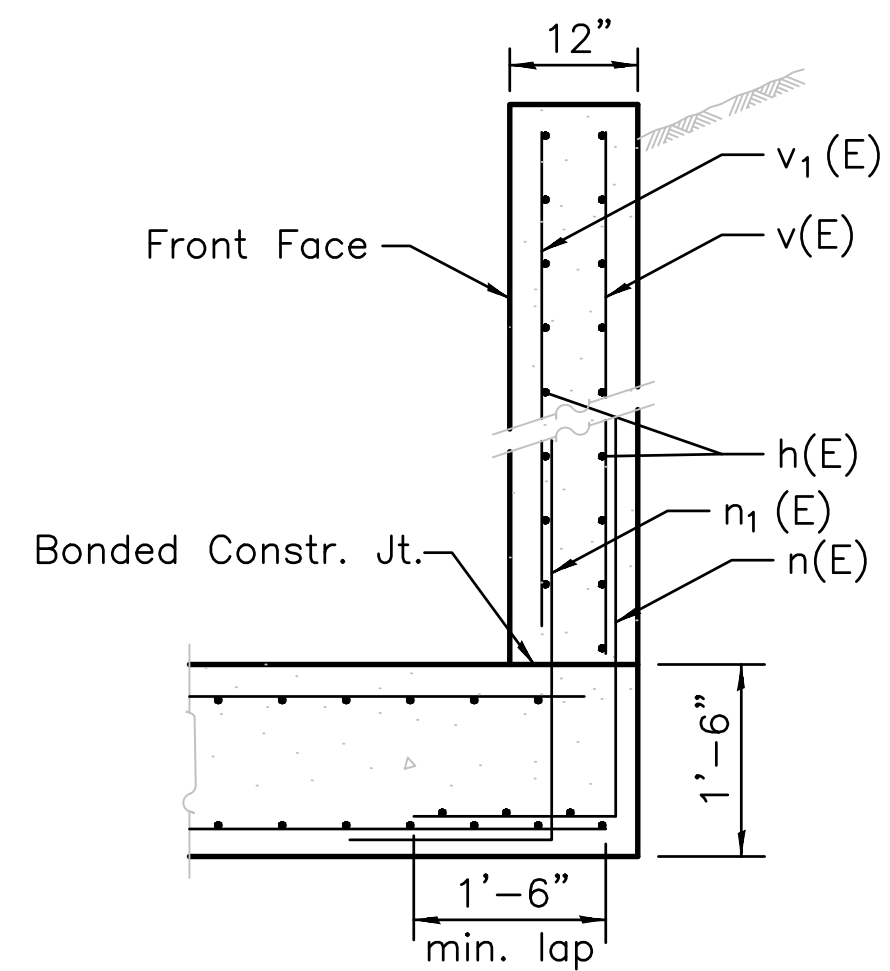
SECTION B-B  
(Top slab at downstream end)



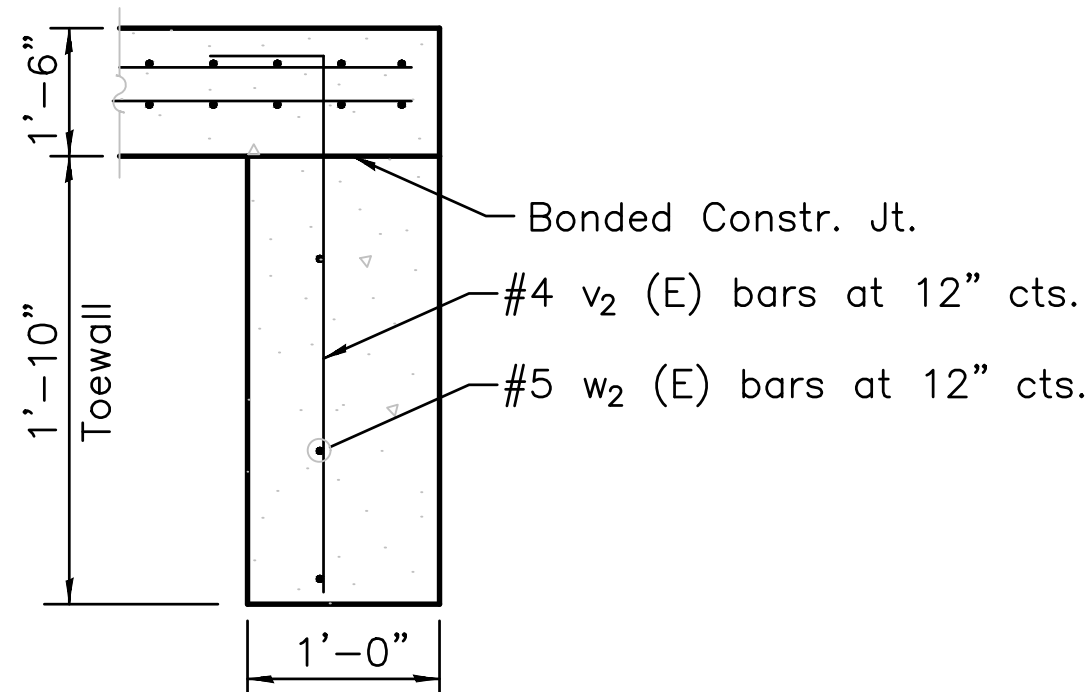
SECTION B-B  
(Top slab at upstream end)



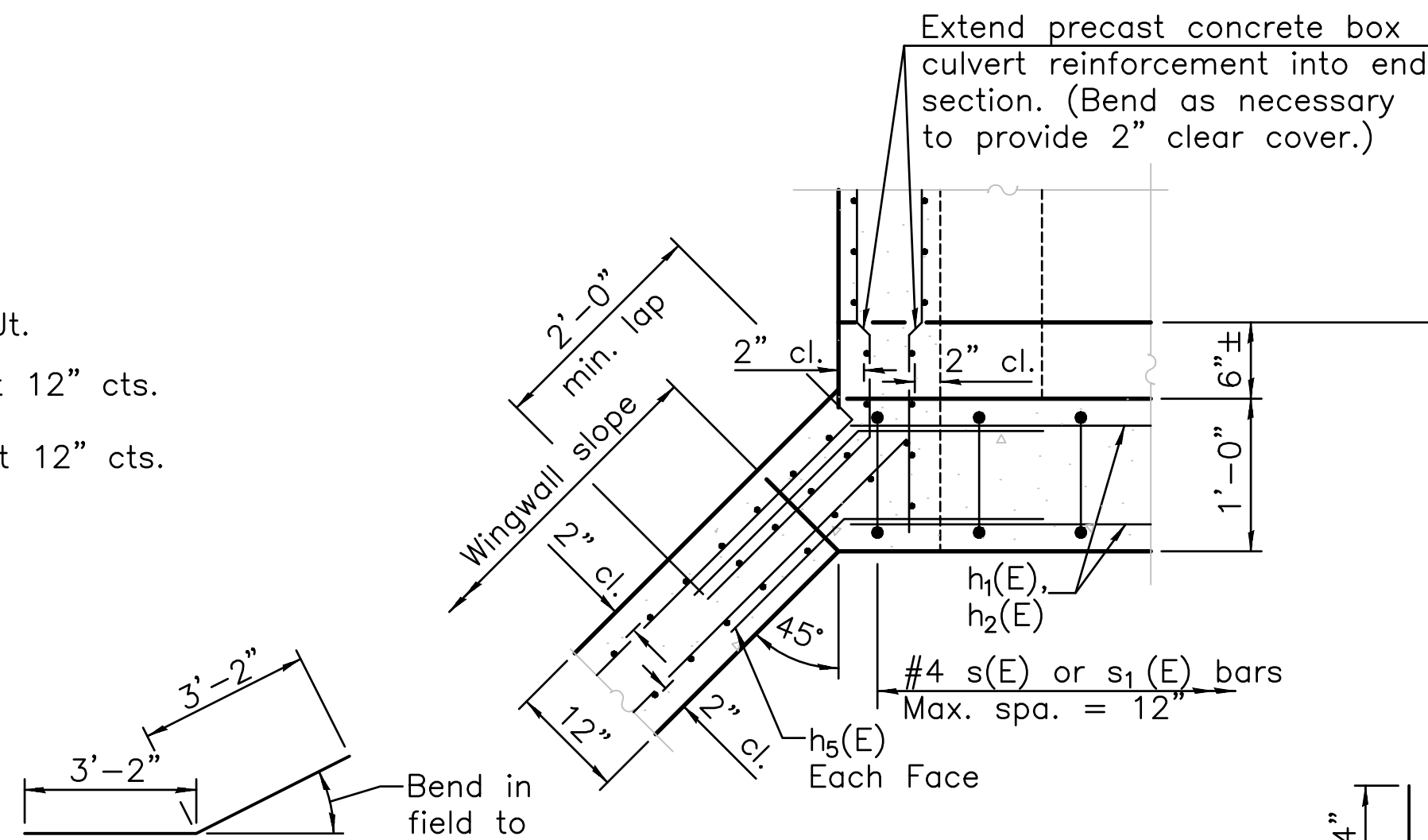
SECTION B-B  
(Bottom slab)



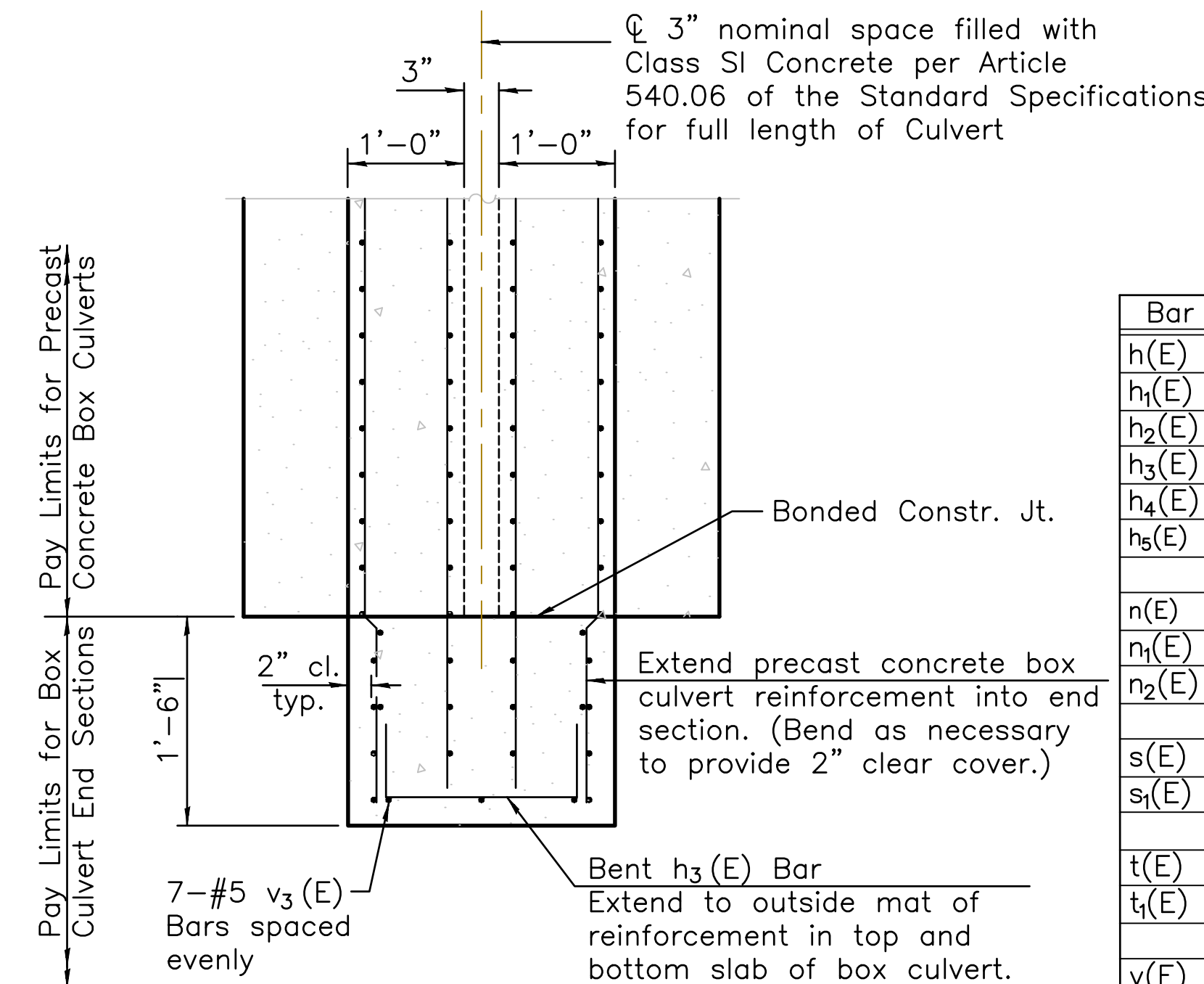
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

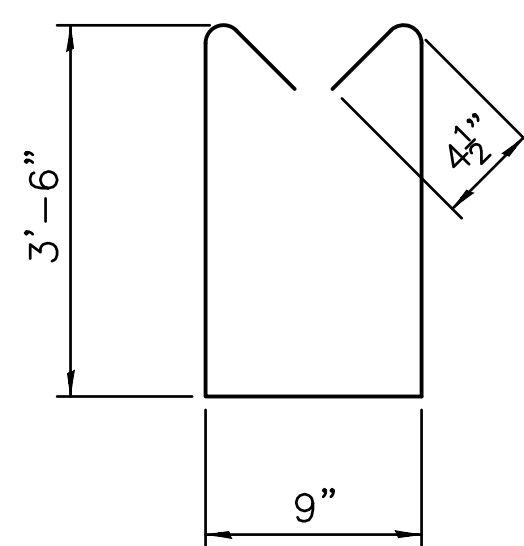
# ONE END SECTION BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	14'-3"	
h1(E)	4	#8	27'-11"	
h2(E)	4	#5	27'-11"	
h3(E)	12	#5	3'-3"	
h4(E)	16	#5	14'-10"	
h5(E)	16	#5	6'-4"	
n(E)	56	#6	6'-1"	
n1(E)	28	#5	6'-1"	
n2(E)	7	#5	6'-1"	
s(E)	28	#5	8'-6"	
s1(E)	28	#5	8'-4 3/4"	
t(E)	56	#5	10'-5"	
t1(E)	32	#5	13'-2"	
v(E)	28	#5	19'-4"	
v1(E)	14	#5	19'-4"	
v2(E)	49	#5	3'-8"	
v3(E)	7	#5	11'-7"	
w(E)	18	#6	27'-11"	
w1(E)	72	#6	13'-8"	
w2(E)	3	#5	47'-9"	
Bar Splicers			Each	28
Reinforcement Bars, Epoxy Coated			Pound	7,061

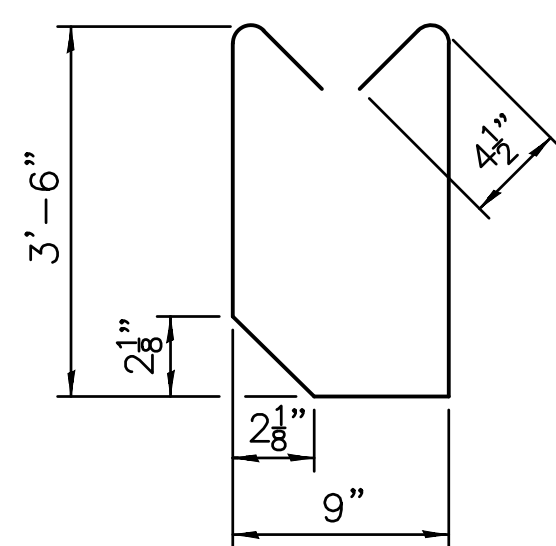
## TOEWALL CONSTRUCTION SEQUENCE

1. Perform excavation and construct toewall.
2. Backfill accordingly and prepare bedding for box culvert end sections.
3. Construct remainder of box culvert end section.

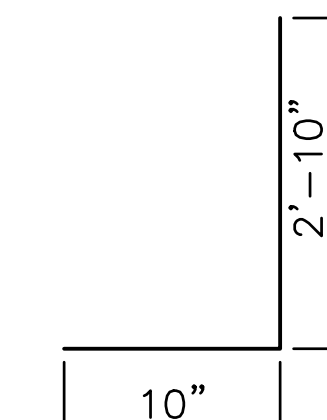
Note:  
If soil conditions permit, the toewall may be poured monolithically with the bottom slab of the end section subject to approval from the Engineer.



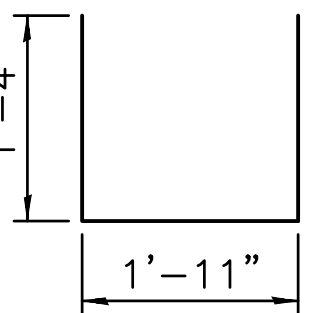
BAR s(E)



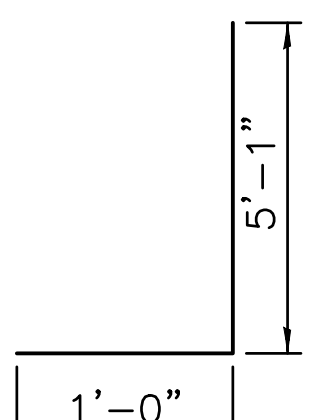
BAR s1(E)



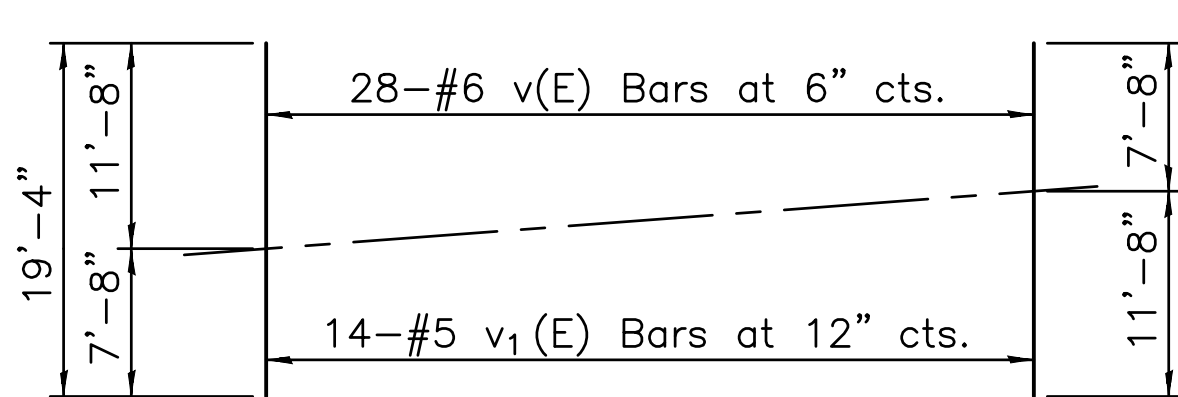
BAR v2(E)



BAR h3(E)



BAR n(E), n1(E), n2(E)



## FIELD CUTTING DIAGRAM

Order v(E) and v1(E) bars full length and cut as shown of use in wingwalls.

(Sheet 2 of 2)

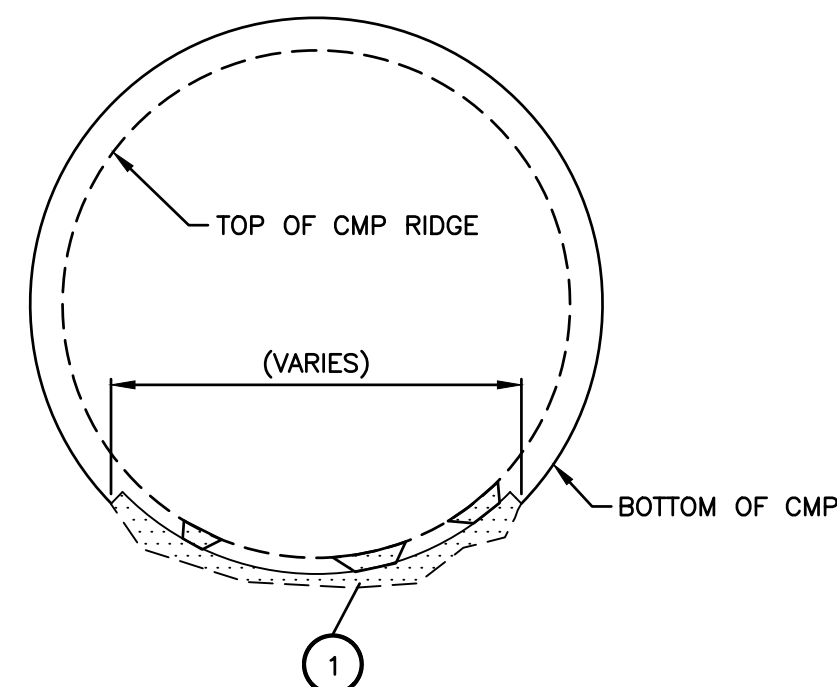
FOR BID  
NOT FOR CONSTRUCTION



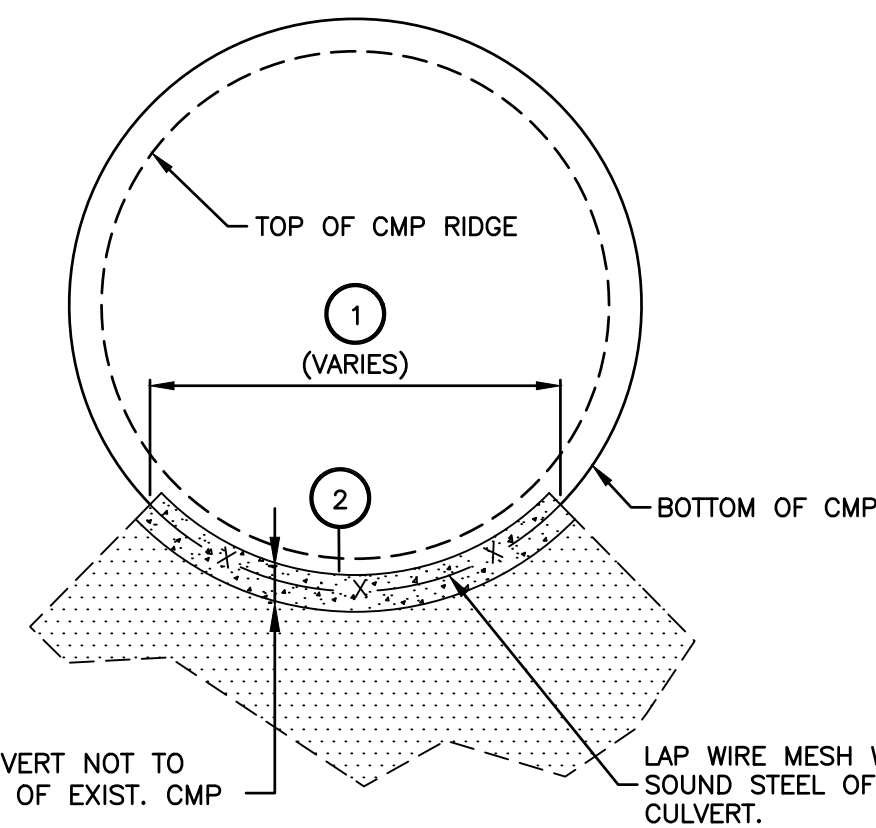


JULIE DESIGN TICKET NUMBER:# A1861870

(2) Working Days before you dig  
(Excluding Sat., Sun. & Holidays)

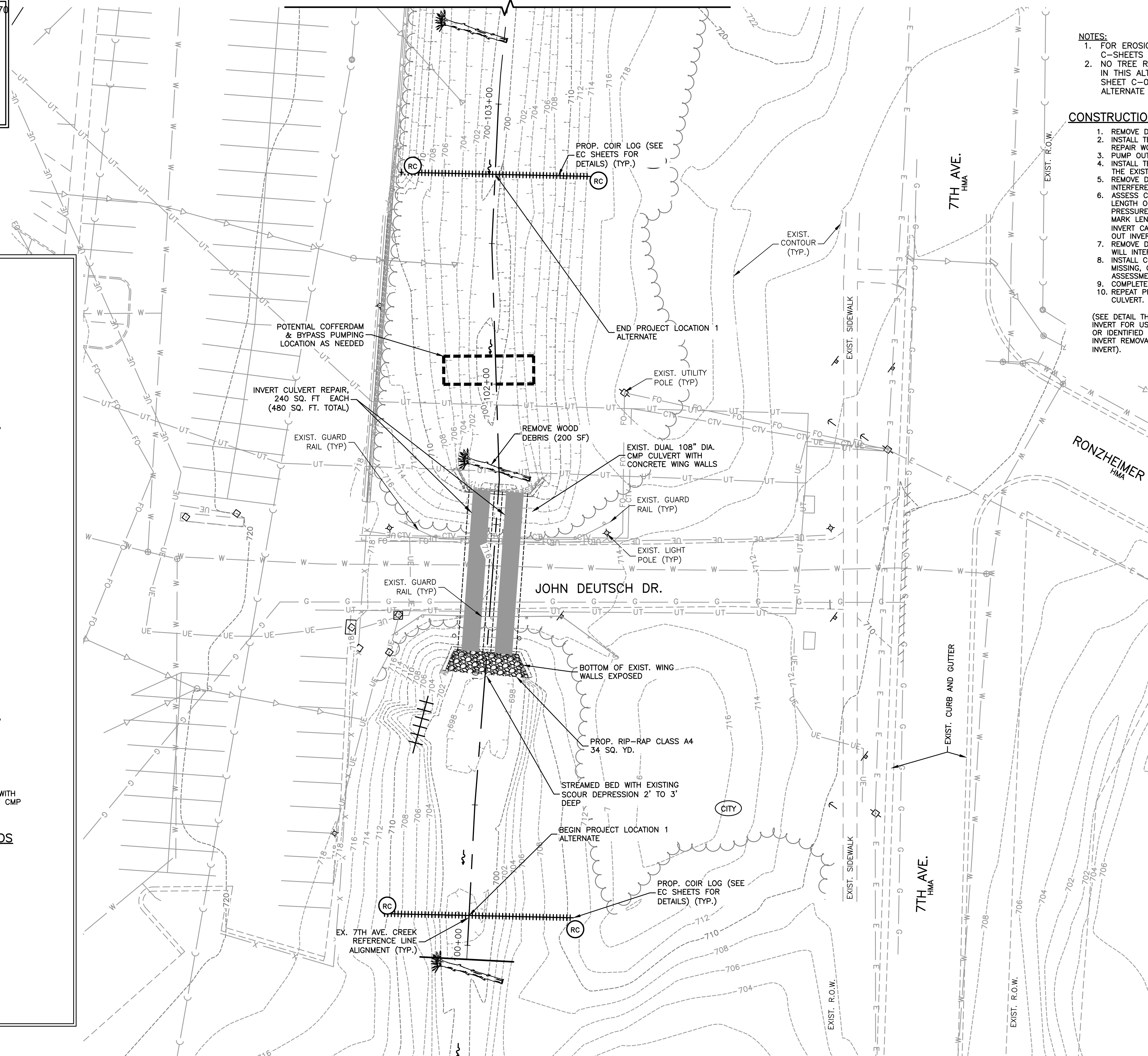


1 PERFORM GROUT INJECTION TO FILL SMALL VOID AREAS BELOW EXISTING CMP INVERT AND ALONG CMP SIDE WALLS.



① AT LOCATIONS OF LARGE INVERT VOIDS, OR WHERE EXISTING INVERT IS SO DEGRADED THAT CUTTING IT AWAY TO ACCESS VOIDS BELOW INVERT IS REQUIRED, INSTALL CONCRETE INVERT. LARGE VOID AREAS MAY BE FILLED WITH EITHER CONCRETE OR CLSM BUT TOP 3" SHALL BE REINFORCED CONCRETE.

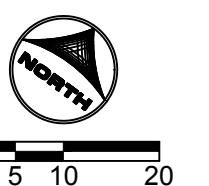
- ② WHERE CONCRETE INVERT IS INSTALLED, TOP OF CONCRETE POUR SHALL NOT EXCEED TOP OF CMP RIDGES. WIRE MESH, OR #3 REINFORCEMENT BARS TO BE CENTERED IN TOP 3" OF CONCRETE AND SHALL BE LAPPED WITH REMAINING CMP DIAMETER.



1. FOR EROSION CONTROL AND FLOW BYPASS INFORMATION SEE C-SHEETS AND PROJECT SPECIFICATIONS FROM BASE BID.
2. NO TREE REMOVAL OR PAVEMENT RESTORATION IS REQUIRED IN THIS ALTERNATE BID. SEE SUMMARY OF QUANTITIES ON SHEET C-02 FOR LIST OF PAY ITEMS ASSOCIATED WITH THIS ALTERNATE BID.

1. REMOVE DEBRIS FROM CULVERT OPENINGS.
2. INSTALL TEMPORARY FLOW BYPASS TO ALLOW REPAIR WORK IN ONE CULVERT TO BEGIN.
3. PUMP OUT WATER FROM AREA TO BE REPAIRED.
4. INSTALL TEMPORARY BRACING TO THE INTERIOR OF THE EXISTING CMP CULVERT TO BE REPAIRED.
5. REMOVE DEBRIS FROM VOID AREAS THAT WILL INTERFERE WITH INSTALLING CONCRETE INVERT.
6. ASSESS CONDITION OF CMP INVERTS. DETERMINE LENGTH OF CMP THAT CAN BE PRESERVED AND PRESSURE GROUT INJECTION CAN FILL VOIDS. MARK LENGTH OF CMP INVERT WHERE EXISTING INVERT CANNOT BE PRESERVED AND/OR CUTTING OUT INVERT WILL BE REQUIRED TO FILL VOIDS.
7. REMOVE DAMAGED SECTIONS OF CMP INVERT THAT WILL INTERFERE WITH INSTALLING CONCRETE INVERT.
8. INSTALL CONCRETE INVERT WHERE CMP INVERT IS MISSING OR WAS REMOVED AS PART OF INVERT ASSESSMENT.
9. COMPLETE PRESSURE GROUT INSTALLATION.
10. REPEAT PROCESS FROM STEP 2 FOR SECOND CULVERT.

(SEE DETAIL THIS SHEET FOR PROPOSED CONCRETE INVERT FOR USE AT LOCATIONS OF MISSING CMP INVERT OR IDENTIFIED DURING INVERT ASSESSMENT FOR CMP INVERT REMOVAL AND REPLACEMENT WITH CONCRETE INVERT).



FOR BID  
NOT FOR CONSTRUCTION

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OFFICIAL DRAWINGS.  
APPROVED: AJ JOB NUMBER: 86140185.06 0" 1"  
CAD DATE: 7/20/2018 6:34:59 PM IF NOT ONE INCH,  
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NO.	DATE	BY	REVISION DESCRIPTION



ILLINOIS DESIGN FIRM # 184.001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 1 – ALTERNATE BID  
**JOHN DEUTSCH DRIVE – EXISTING CULVERT  
REHABILITATION**

SHEET NO.  
LT-1



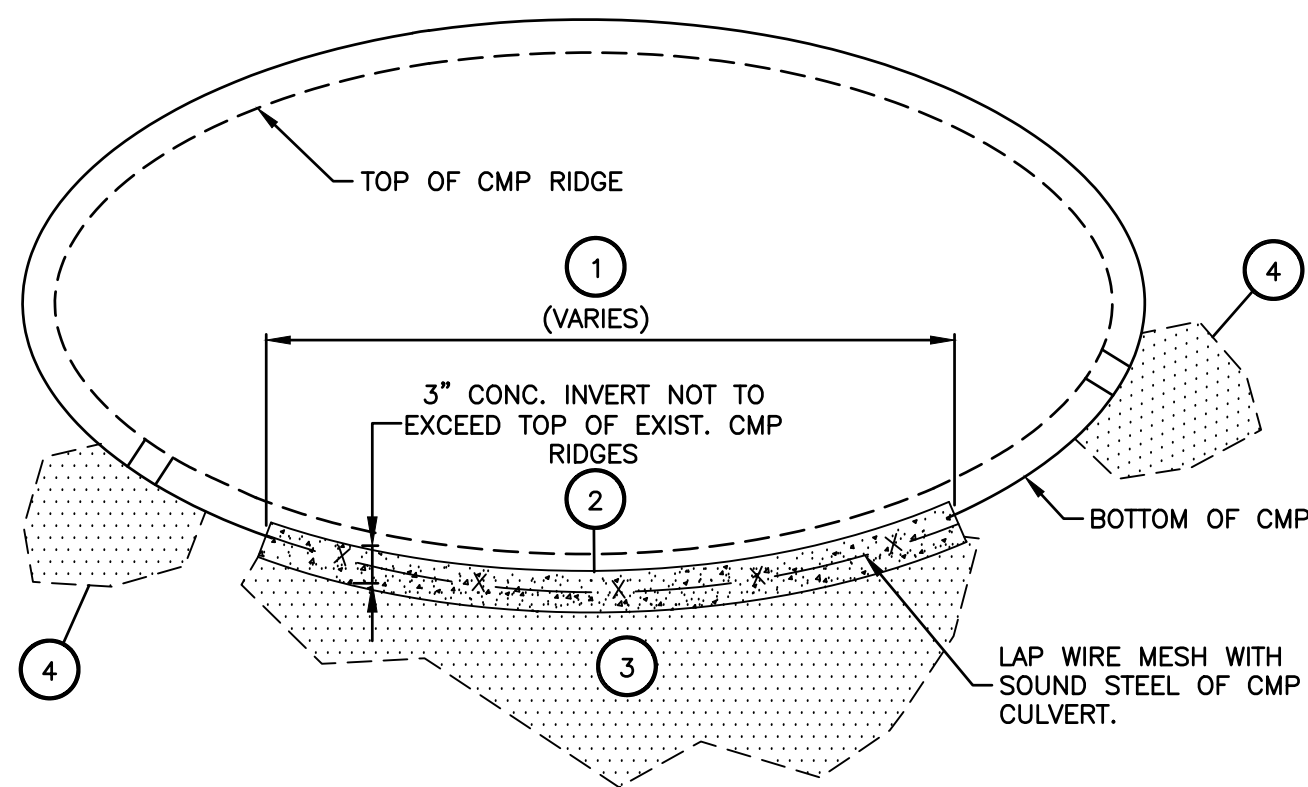






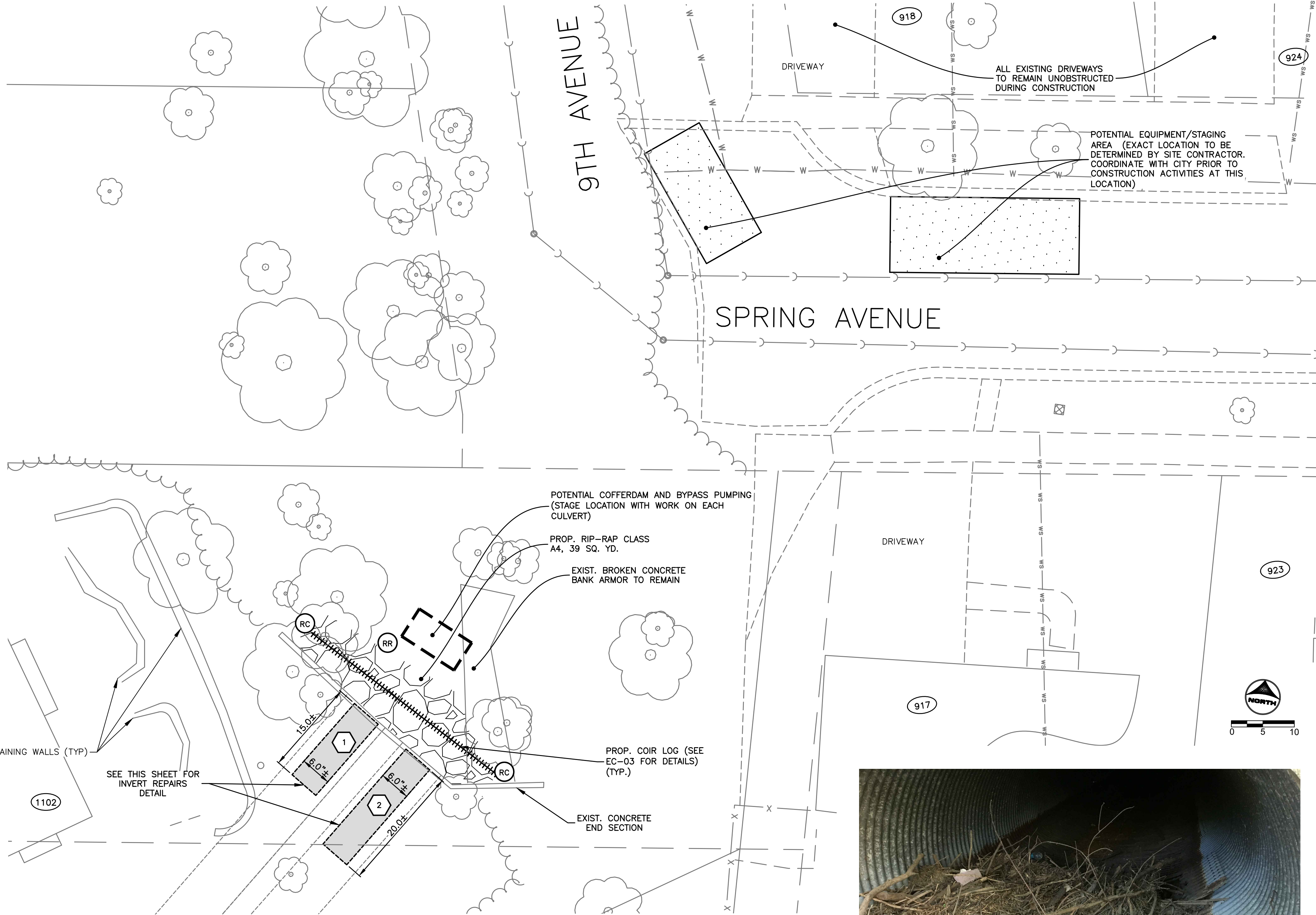
1 EXISTING NORTH CMP CULVERT INVERT TO BE REPAIRED  
(90 SQ. FT. OF INVERT REPAIR)

EXISTING CMP CULVERT INVERT REPAIR



- 1 AT LOCATIONS OF LARGE INVERT VOIDS, OR WHERE EXISTING INVERT IS SO DETERIORATED THAT CUTTING IT AWAY TO ACCESS VOIDS BELOW INVERT IS REQUIRED, INSTALL CONCRETE INVERT. LARGE VOID AREAS MAY BE FILLED WITH EITHER CONCRETE OR CLSM BUT TOP 3" SHALL BE REINFORCED CONCRETE.
- 2 WHERE CONCRETE INVERT IS INSTALLED, TOP OF CONCRETE POUR SHALL NOT EXCEED TOP OF CMP RIDGES. WIRE MESH, OR #3 REINFORCEMENT BARS TO BE CENTERED IN TOP 3" OF CONCRETE AND SHALL BE LAPPED WITH REMAINING CMP DIAMETER.
- 3 USE GROUT MIX (PRESSURE GROUT INSTALLATION) TO FILL VOID AREAS WHERE EXISTING CMP INVERT CAN BE PRESERVED
- 4 IN FIRST 20'-0" OF CULVERT LENGTH INSTALL PORTS FOR PRESSURE GROUT INJECTION TO FILL VOIDS BEHIND EXIST. CMP WALLS OR SUBMIT ALTERNATIVE METHOD TO FILL INACCESSIBLE VOIDS BEHIND CULVERT WALLS.

NOTE: IF ALTERNATE BID IS AWARDED, THIS REPAIR DETAIL SHALL BE COORDINATED WITH CULVERT LINING PRODUCT SUPPLIER AND MODIFIED AS NEEDED FOR COMPATIBILITY WITH LINER APPLICATION.



EXIST. RETAINING WALLS (TYP)

SEE THIS SHEET FOR INVERT REPAIRS DETAIL

POTENTIAL COFFERDAM AND BYPASS PUMPING (STAGE LOCATION WITH WORK ON EACH CULVERT)

PROP. RIP-RAP CLASS A4, 39 SQ. YD.

EXIST. BROKEN CONCRETE BANK ARMOR TO REMAIN

PROP. COIR LOG (SEE EC-03 FOR DETAILS) (TYP.)

EXIST. CONCRETE END SECTION

LEGEND:

- INDICATES RIP-RAP (SEE PLAN FOR SIZE AND QUANTITY)
- INDICATES COIR LOG
- INDICATES EROSION CONTROL MEASURE (SEE SHEET C-05 - EC-05 FOR EROSION CONTROL LEGEND / DETAILS)
- INDICATES TREE AND BRUSH REMOVAL (SEE SHEET FOR SIZE AND QUANTITY)
- INDICATES TREE TRUNK & ROOT PROTECTION (POTENTIAL ROOT PRUNING REQUIRED) (SEE SHEET EC-03 FOR DETAIL)

CONSTRUCTION SEQUENCE REQUIREMENTS:

1. REMOVE DEBRIS FROM CULVERT OPENINGS.
2. INSTALL TEMPORARY FLOW BYPASS TO ALLOW REPAIR WORK IN ONE CULVERT TO BEGIN.
3. PUMP OUT WATER FROM AREA TO BE REPAIRED.
4. INSTALL TEMPORARY BRACING TO THE INTERIOR OF THE EXISTING CMP CULVERT TO BE REPAIRED.
5. REMOVE DEBRIS FROM VOID AREAS THAT WILL INTERFERE WITH INSTALLING CONCRETE INVERT.
6. ASSESS CONDITION OF CMP INVERTS. DETERMINE LENGTH OF CMP INVERT WHERE CMP INVERT CAN BE PRESERVED AND PRESSURE GROUT INJECTION CAN FILL VOIDS. MARK LENGTH OF CMP INVERT WHERE EXISTING INVERT CANNOT BE PRESERVED AND/OR CUTTING OUT INVERT WILL BE REQUIRED TO FILL VOIDS.
7. REMOVE DAMAGED SECTIONS OF CMP INVERT THAT WILL INTERFERE WITH INSTALLING CONCRETE INVERT, (NOT TO EXCEED 20 FEET OF CULVERT LENGTH AND NOT BEFORE TEMPORARY BRACING IS INSTALLED).
8. INSTALL CONCRETE INVERT WHERE CMP INVERT IS MISSING, OR WAS REMOVED AS PART OF INVERT ASSESSMENT.
9. INSTALL PORTS FOR GROUT MIX INSTALLATION AT SIDE WALLS AND INVERTS OF CMP CULVERT.
10. COMPLETE PRESSURE GROUT INSTALLATION OF VOID AREAS BELOW EXISTING CMP INVERTS AND SIDE WALLS OF CMP CULVERT.
11. REPEAT PROCESS FROM STEP 2 FOR SECOND CULVERT.

(SEE DETAIL THIS SHEET FOR PROPOSED CONCRETE INVERT FOR USE AT LOCATIONS OF MISSING CMP INVERT OR IDENTIFIED DURING INVERT ASSESSMENT FOR CMP INVERT REMOVAL AND REPLACEMENT WITH CONCRETE INVERT).



2 EXISTING SOUTH CMP CULVERT INVERT TO BE REPAIRED  
(120 SQ. FT. OF INVERT REPAIR)

FOR BID  
NOT FOR CONSTRUCTION

DRAWN BY: MPL JOB DATE: 10/27/2017  
APPROVED: AJ JOB NUMBER: 86140185.06  
CAD DATE: 5/22/2018 8:51:24 AM  
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NO.	DATE	BY	REVISION DESCRIPTION

ILLINOIS DESIGN FIRM # 184-001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT  
AND 7TH AVENUE CULVERT REHABILITATION  
CLIENT: CITY OF ST. CHARLES  
KANE COUNTY, IL

PROJECT LOCATION 2 - BASE BID  
7TH AVE CULVERT - PROPOSED CULVERT  
REHABILITATION . DETAILS

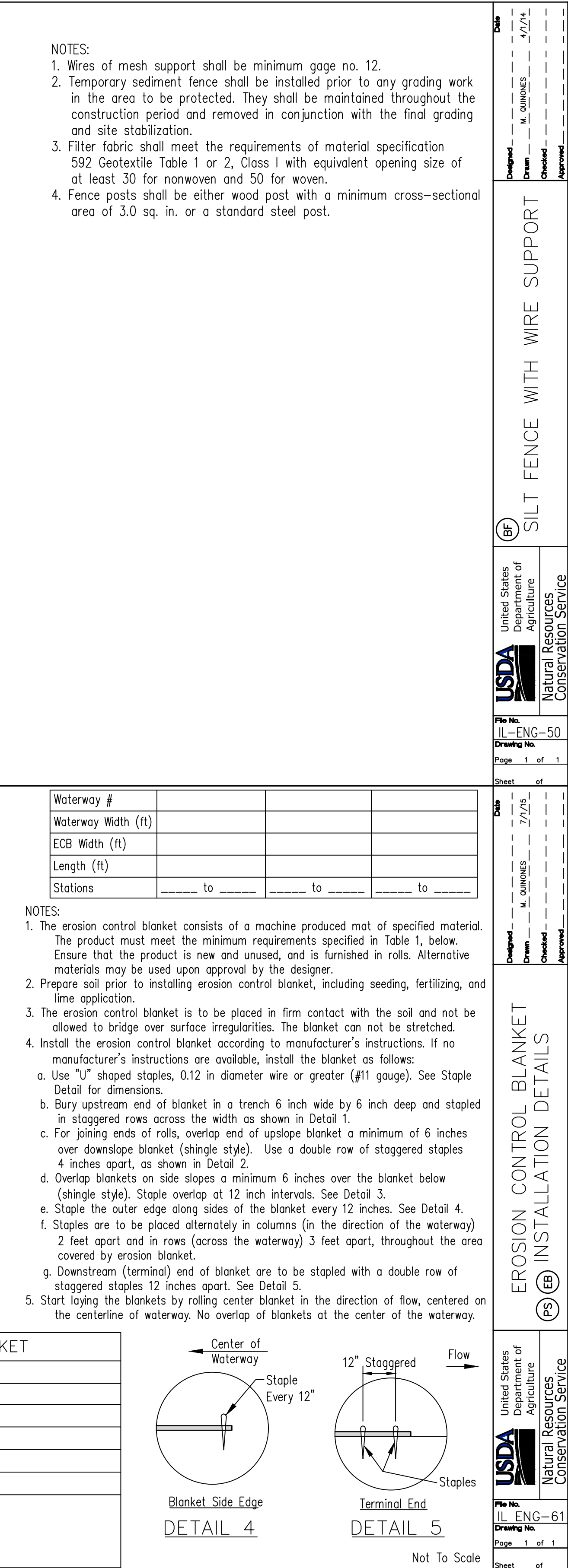
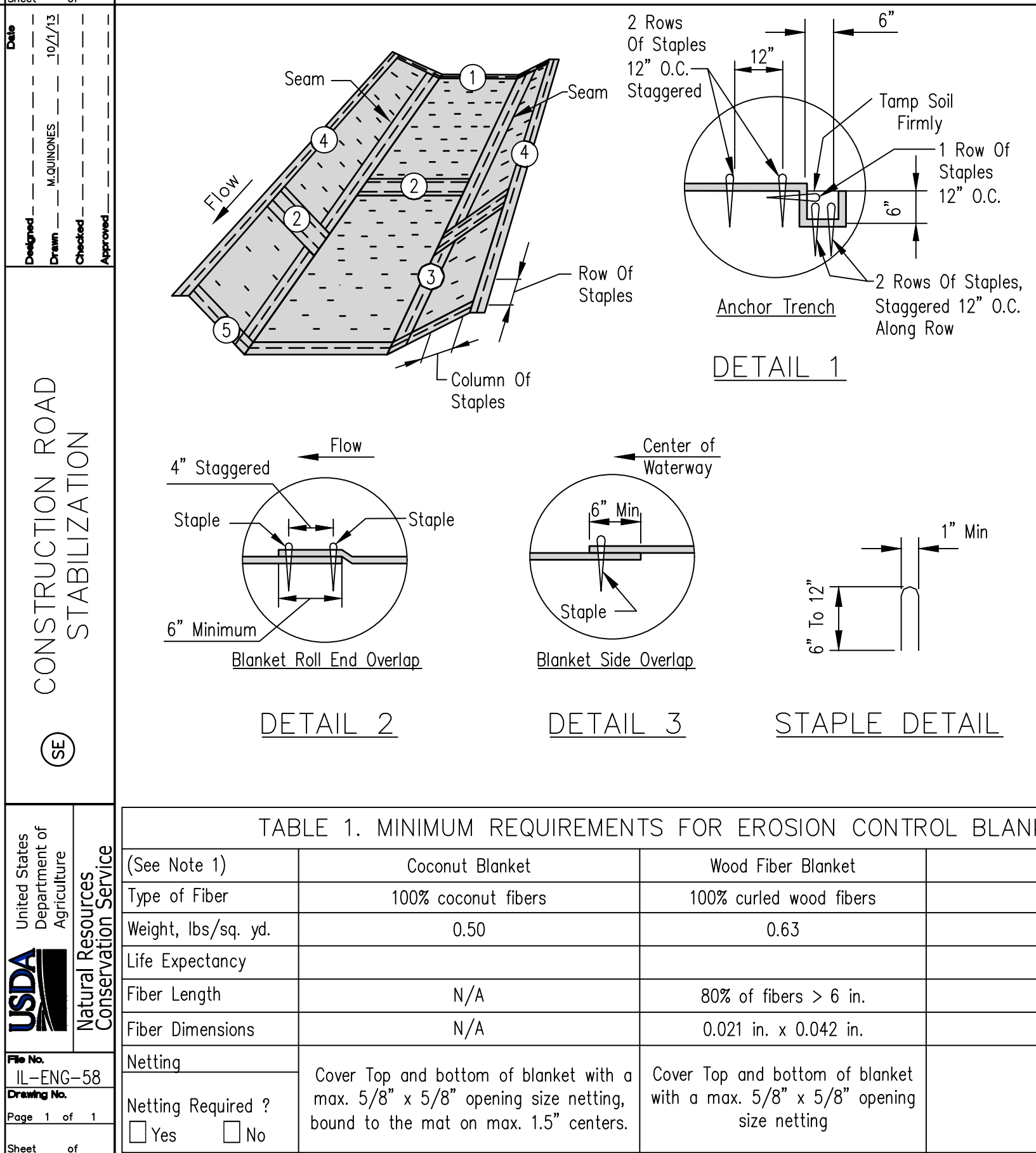
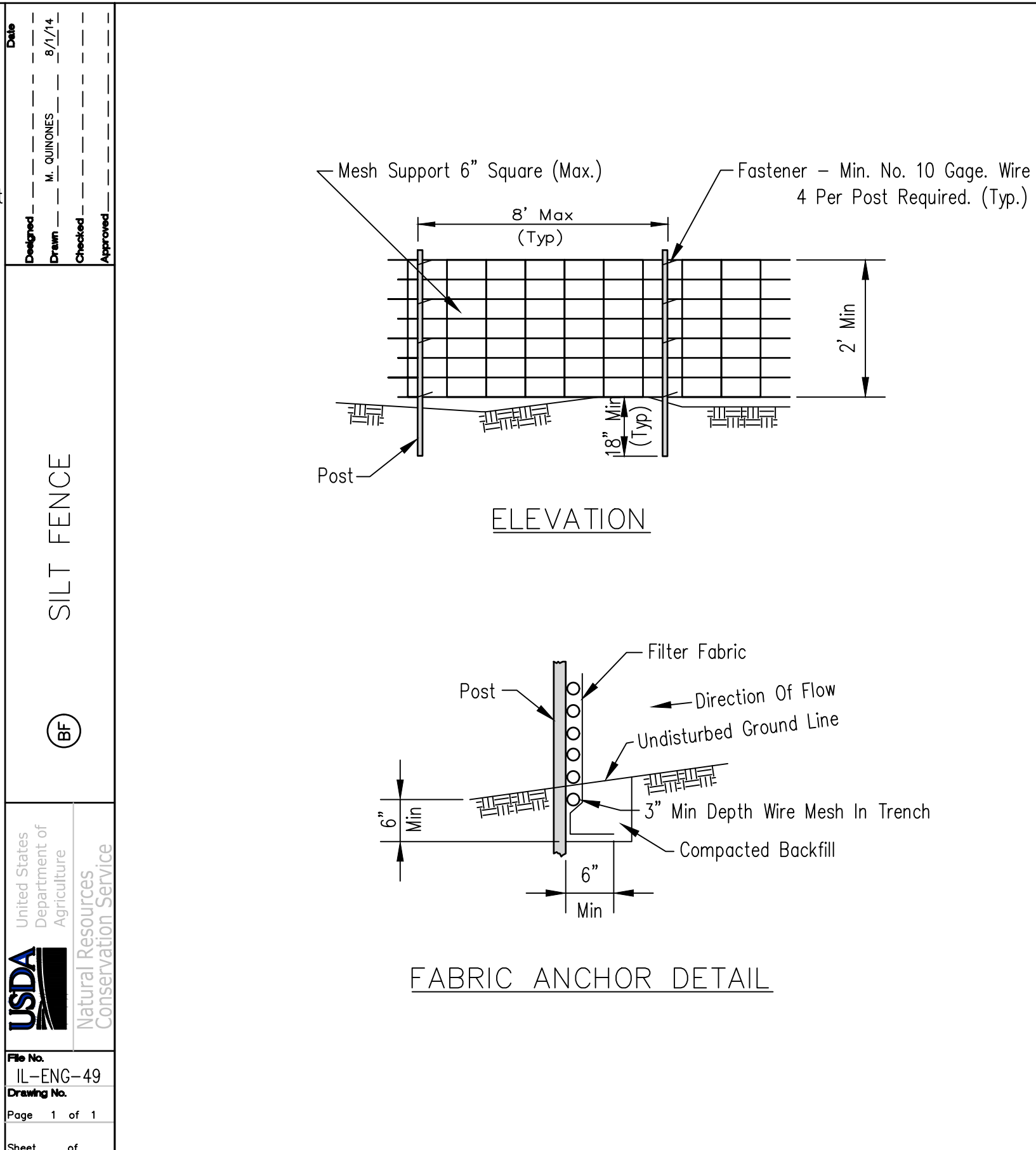
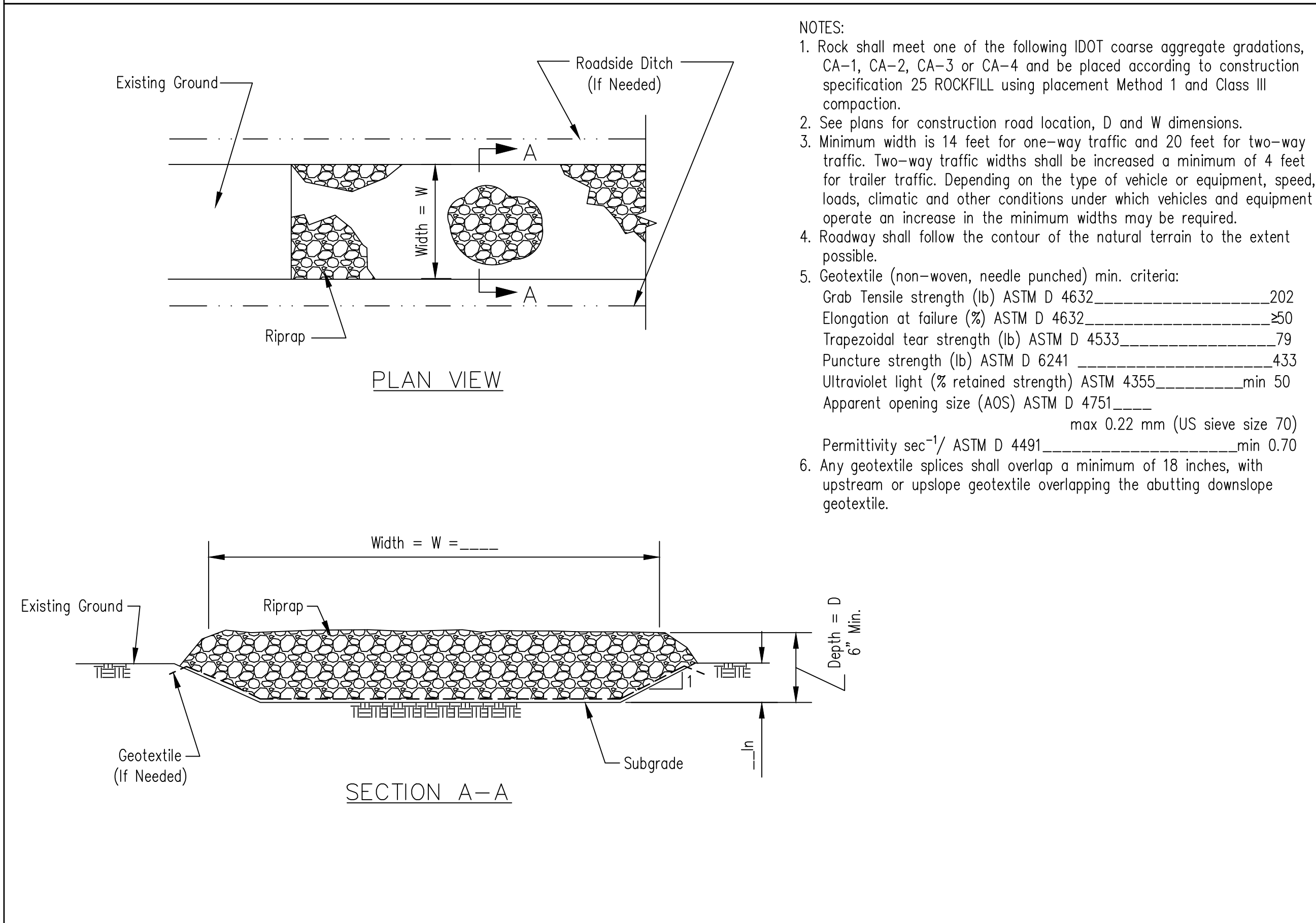
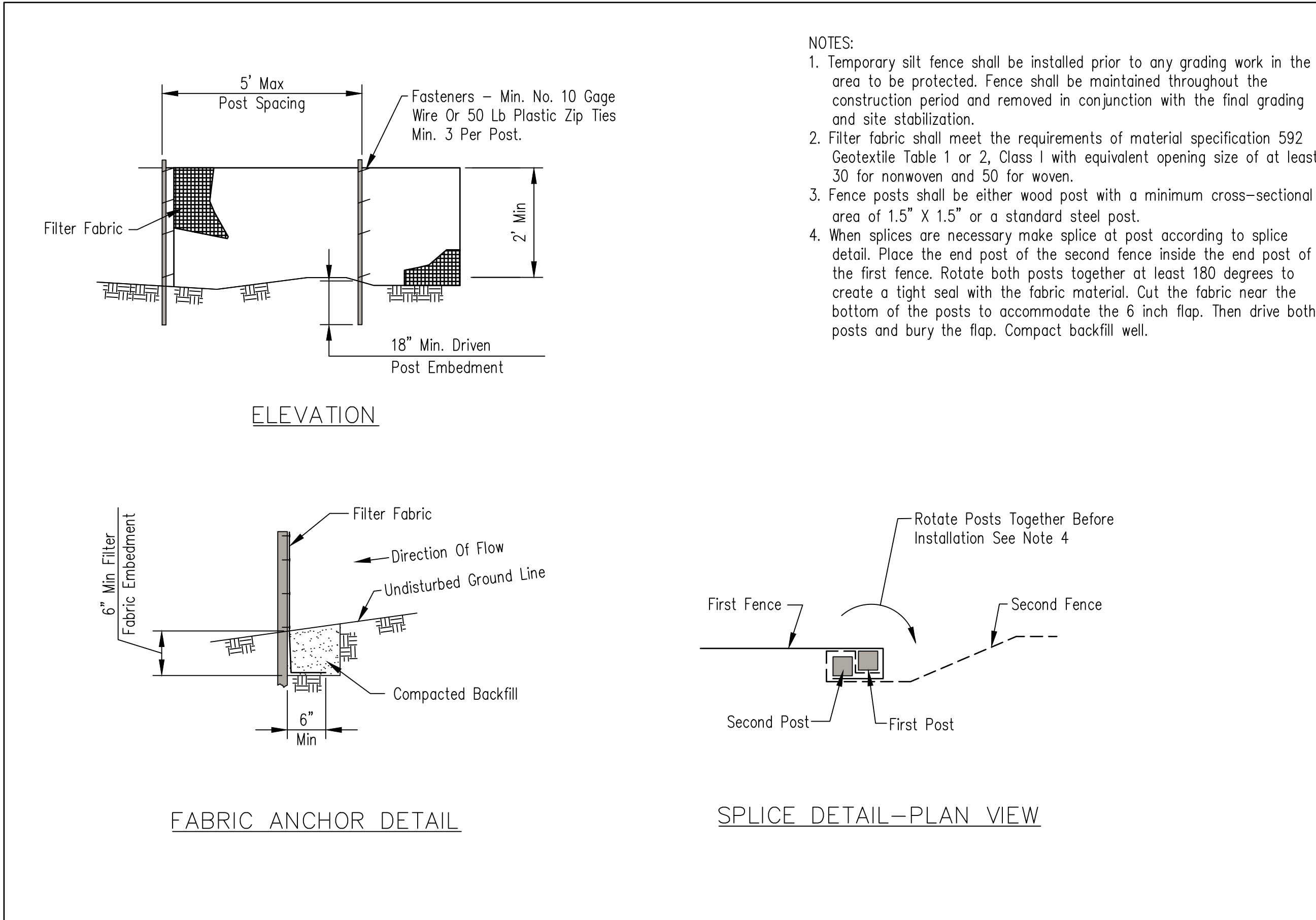
SHEET NO.  
C2-02







Xref: xgl-1-dm01; IL-605R; IL-541B; IL-541A



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NO.	DATE	BY	REVISION DESCRIPTION

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420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
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7TH AVENUE CREEK IMPROVEMENTS  
CITY OF ST. CHARLES  
KANE COUNTY, IL

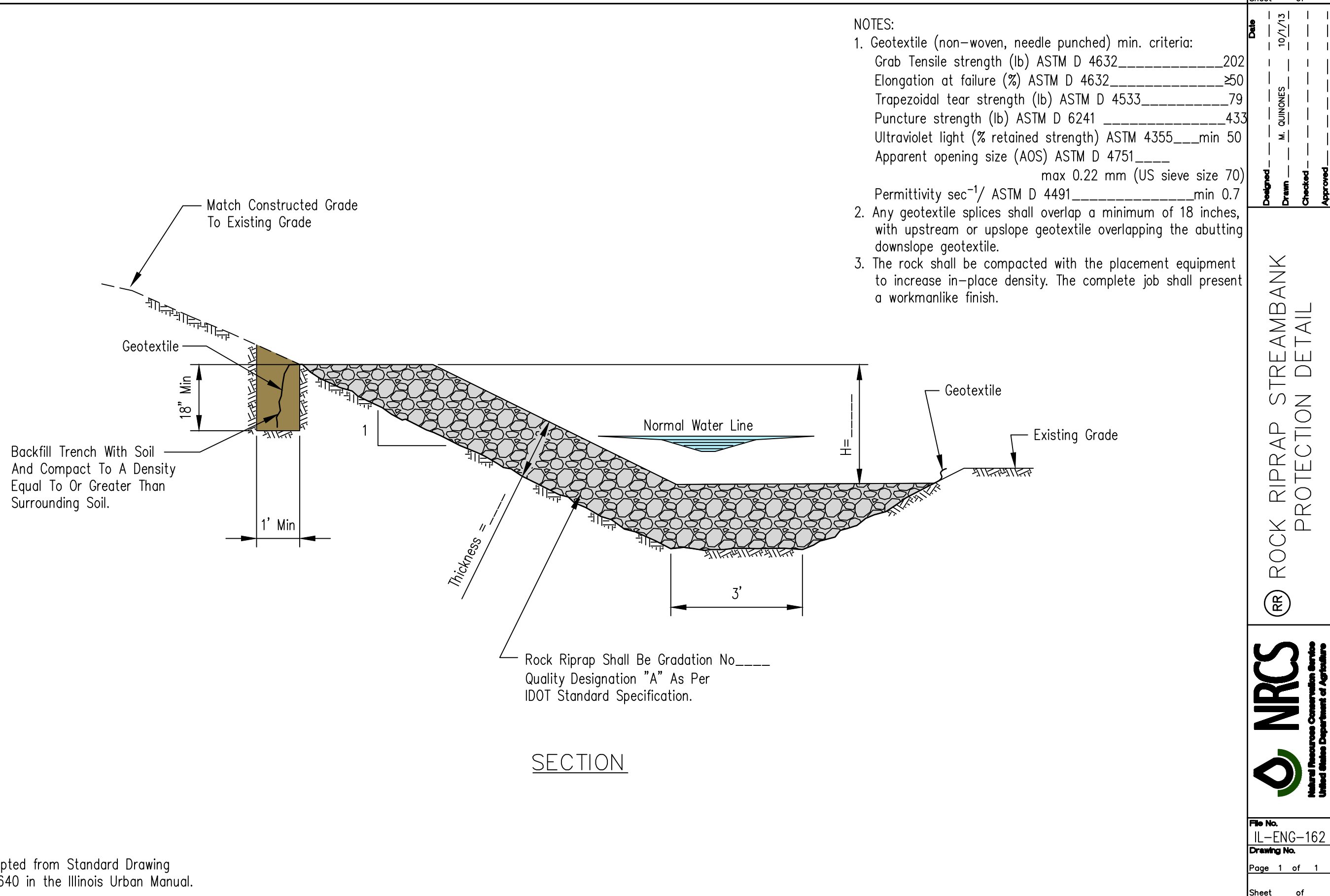
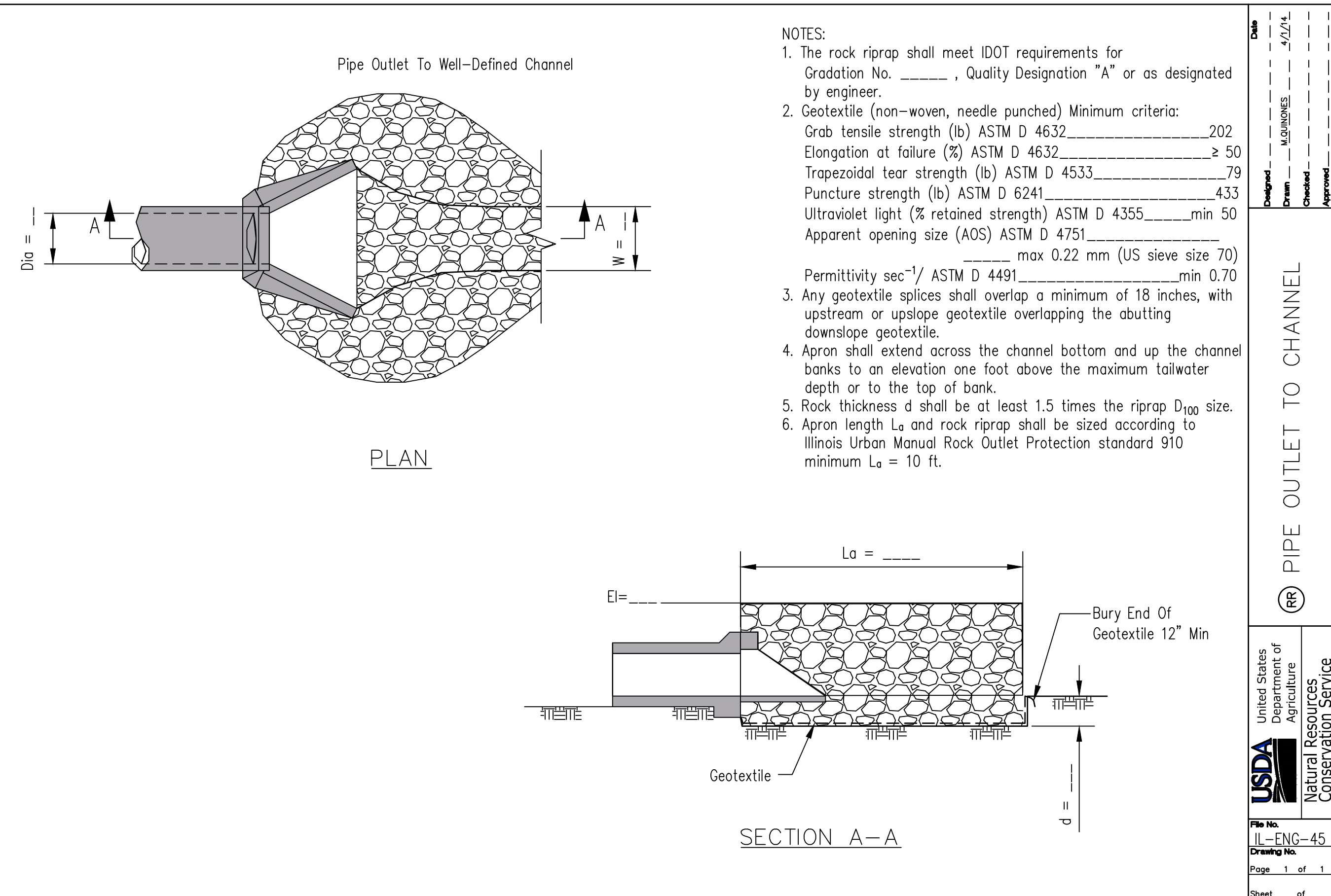
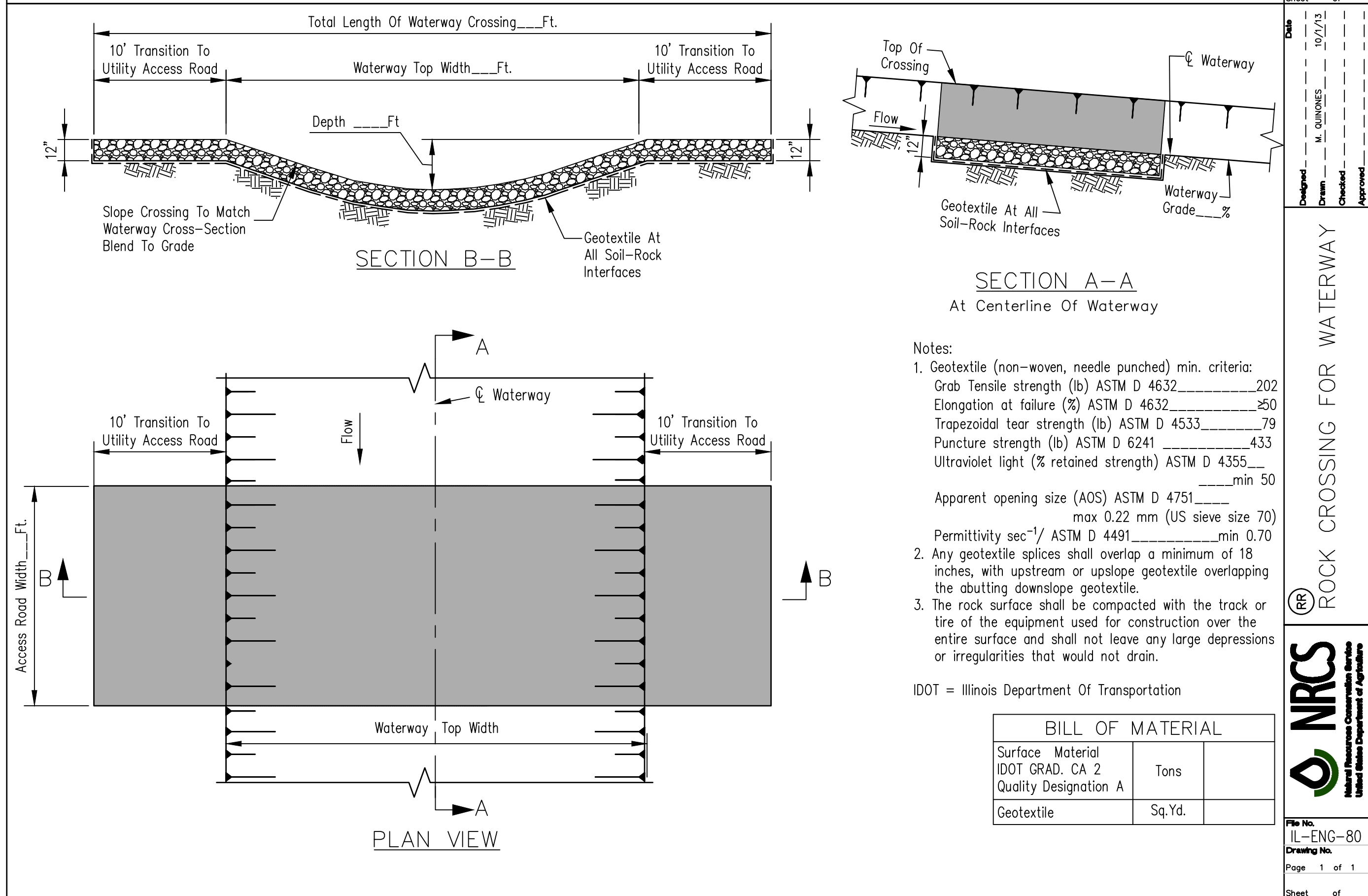
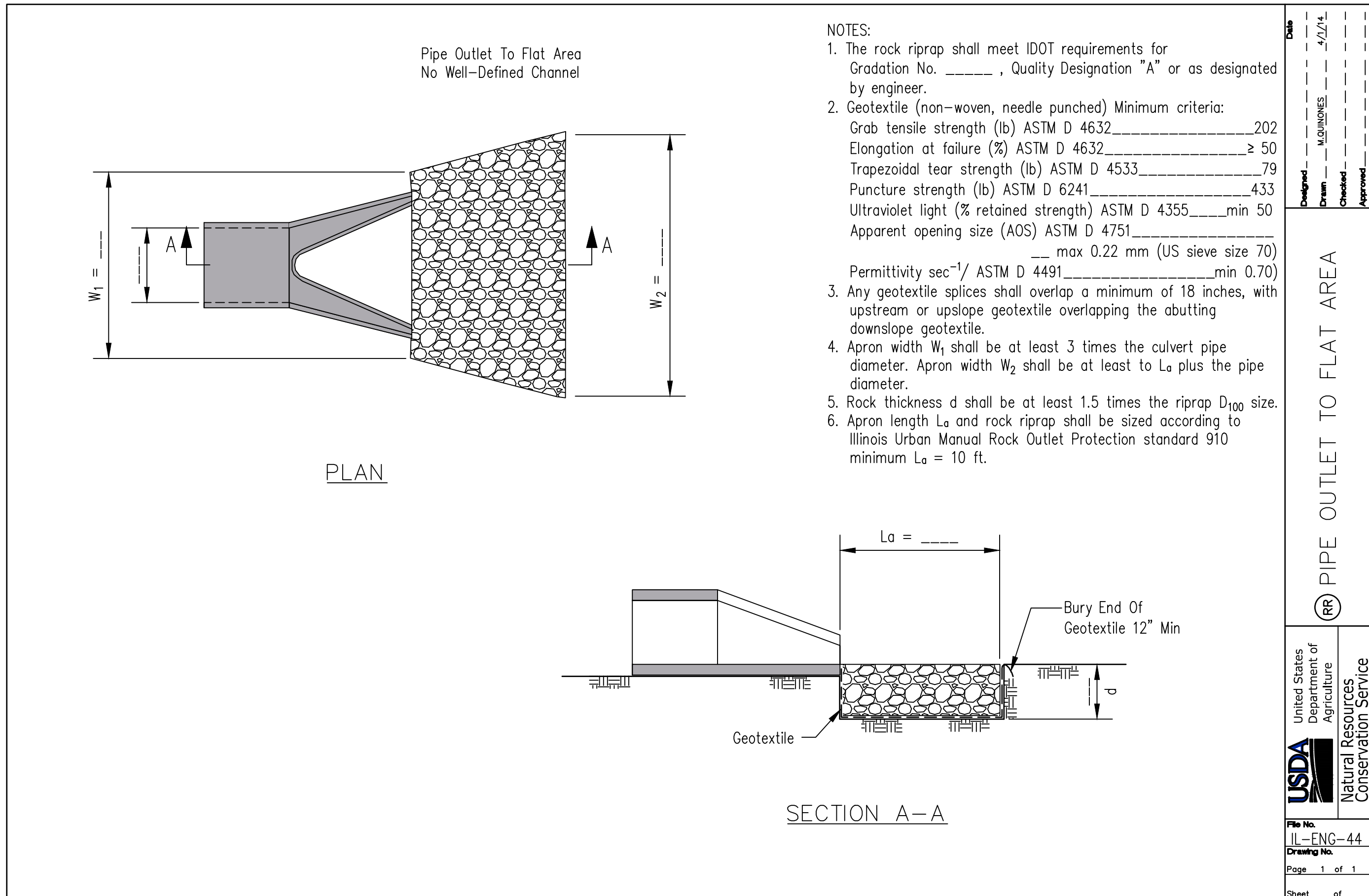
DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND ALTERNATE BIDS)  
EROSION CONTROL DETAILS

SHEET NO.  
EC-01

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Xref: xgl-1-dh01; IL-605R; IL-541B; IL-541A



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7TH AVENUE CREEK IMPROVEMENTS  
CITY OF ST. CHARLES  
KANE COUNTY, IL

DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND ALTERNATE BIDS)  
EROSION CONTROL DETAILS

SHEET NO.  
EC-02

FOR BID  
NOT FOR CONSTRUCTION



Xrefs: xgl-1-dm01; IL-605R; IL-541B; IL-541A

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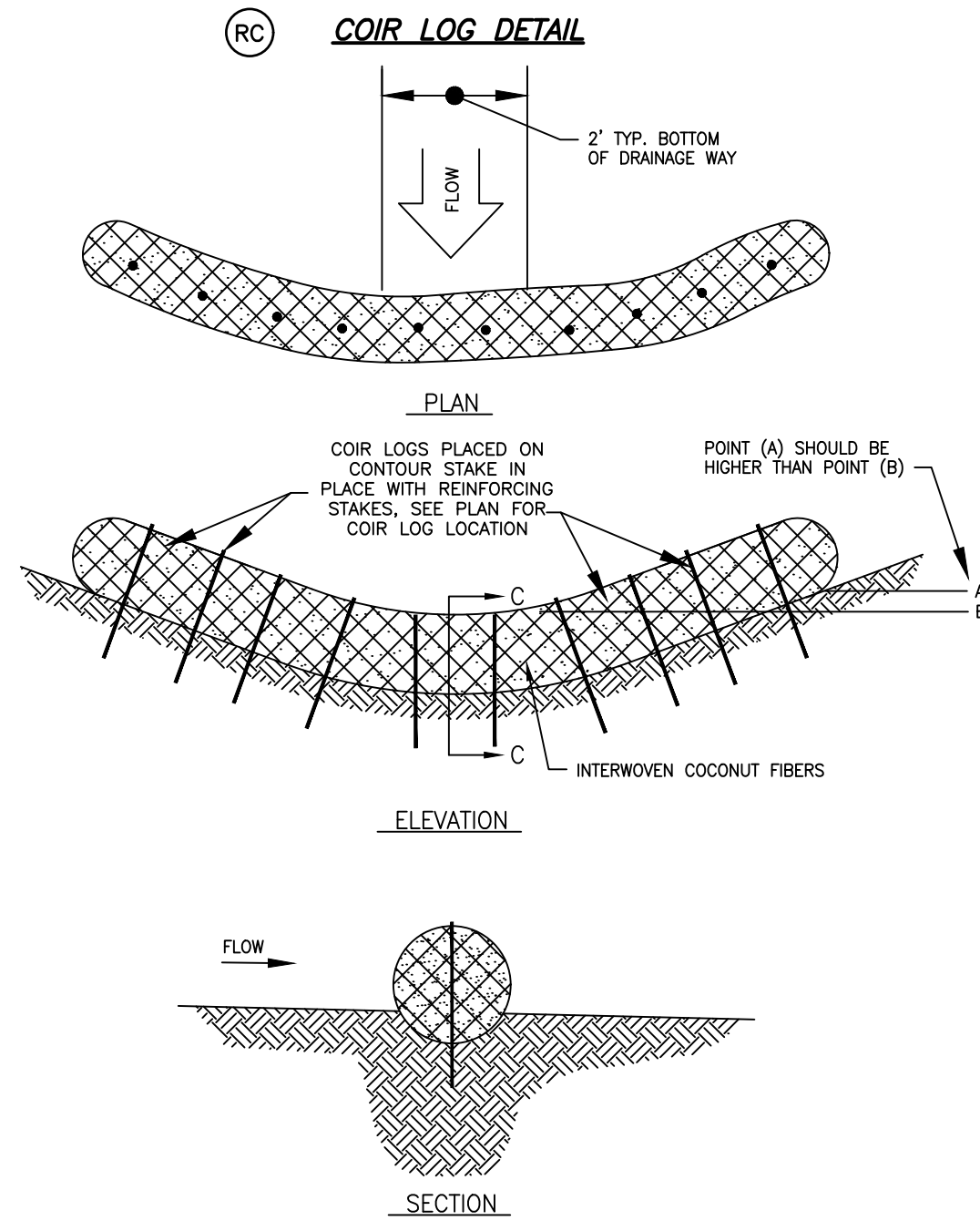
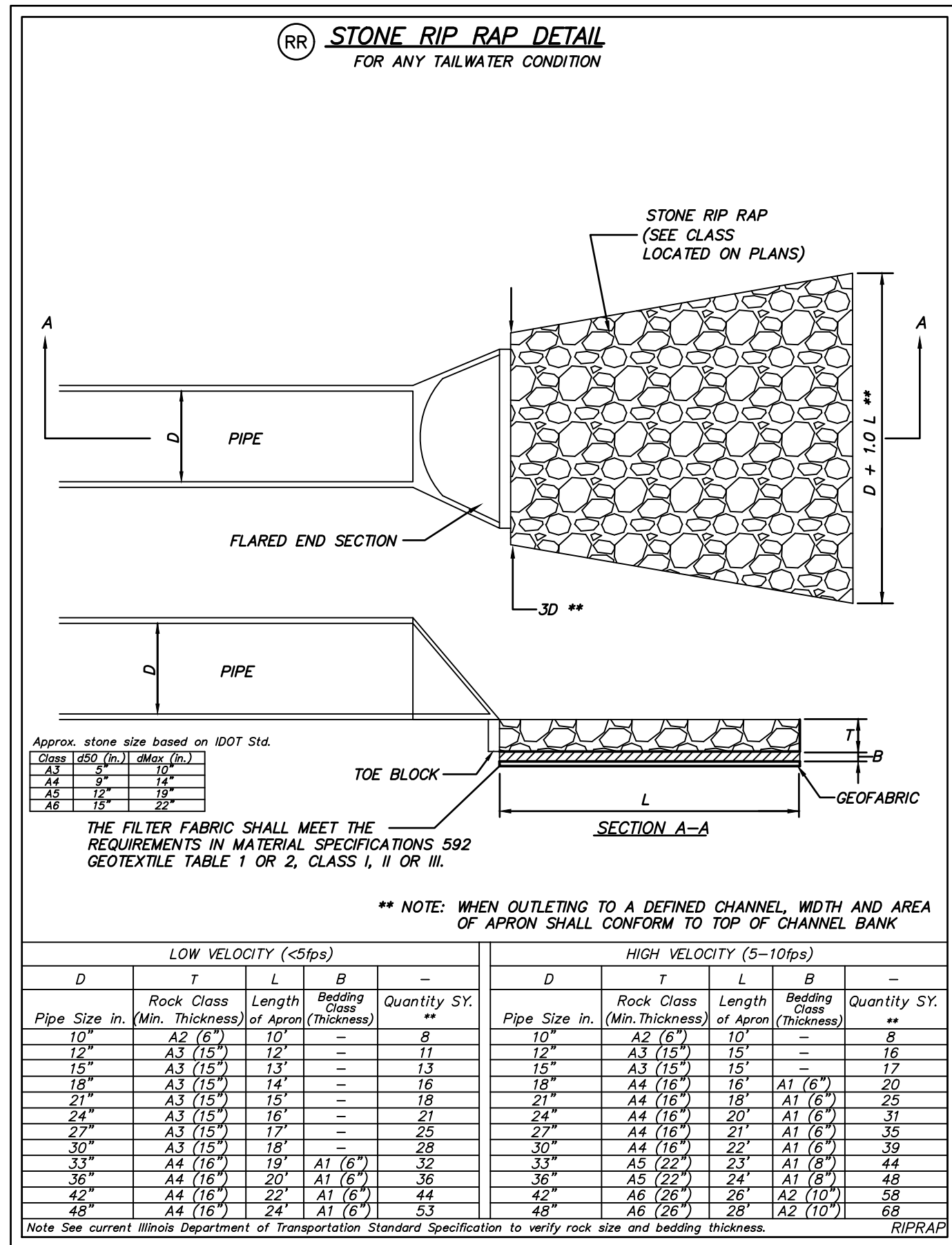


ILLINOIS DESIGN FIRM # 184.001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
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7TH AVENUE CREEK IMPROVEMENTS  
CITY OF ST. CHARLES  
KANE COUNTY, IL

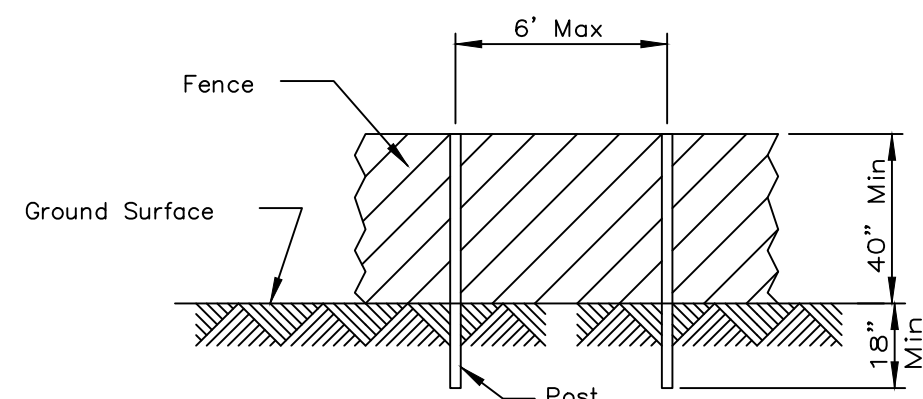
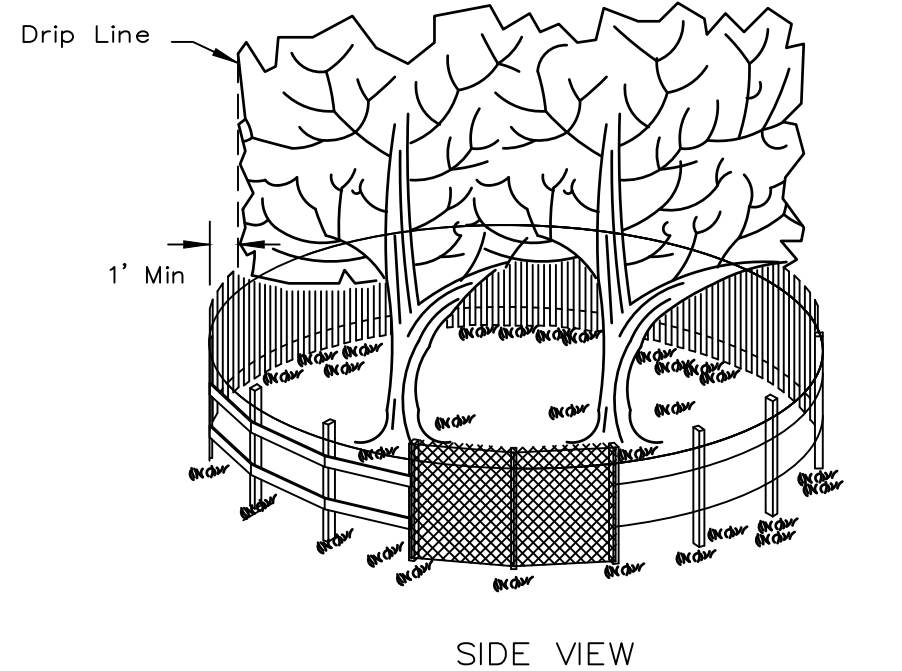
DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND  
ALTERNATE BIDS)  
EROSION CONTROL DETAILS

SHEET NO.  
EC-03



1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURE SPECIFICATIONS
2. SECURE LOG WITH WOODEN OR LIVE STAKES WOVEN THROUGH COIR LOG MESH AND DRIVEN INTO EARTH. STAKE LOG PER MANUFACTURE SPECIFICATIONS. TIE ADJACENT LOGS TOGETHER WITH BIODEGRADABLE TWINE. COMPACT SOIL AROUND LOGS. SECURE THE UPSTREAM AND DOWNSTREAM ENDS BY POSITIONING COIR LOGS SO THEY TRANSITION SMOOTHLY INTO A STABILIZED BANK
3. LENGTH OF STAKE SHOULD BE BASED ON SOIL TYPE
4. NOT RECOMMENDED FOR HIGH VELOCITY AREAS
5. AVAILABLE DIA. 6", 8", 12", 16", & 20"
6. AVAILABLE LENGTH. 10' & 20'

#### TREE PROTECTION - FENCING



#### POST AND FENCE DETAIL

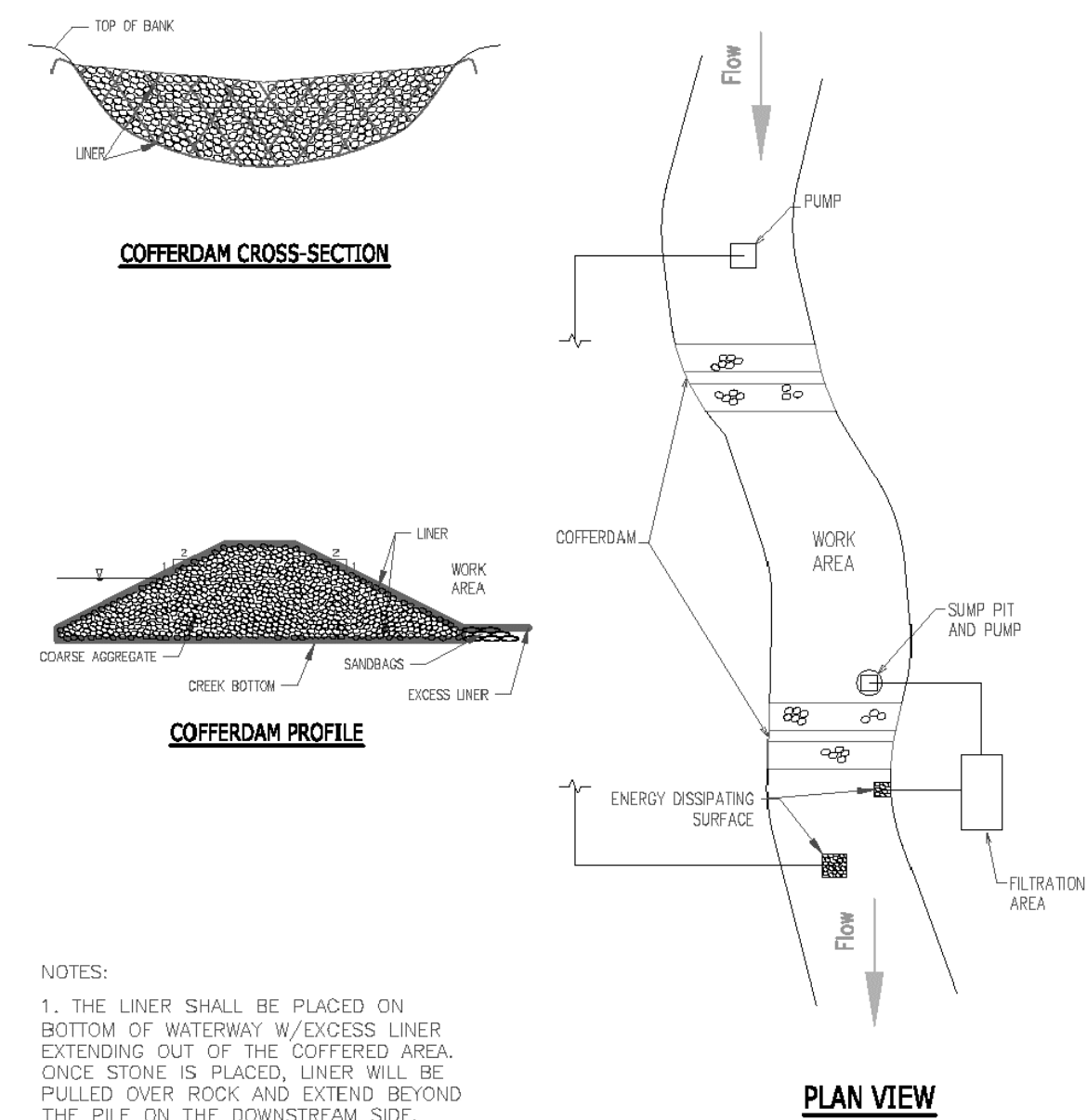
- NOTES:
1. The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
  2. Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
  3. The fence may be either 40" high snow fence, 40" plastic web fencing or any other material as approved by the engineer/inspector.

REFERENCE  
Project \_\_\_\_\_  
Designed \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



STANDARD DWG. NO.  
IL-690  
SHEET 1 OF 1  
DATE 4-7-94

#### ROCK COFFERDAM



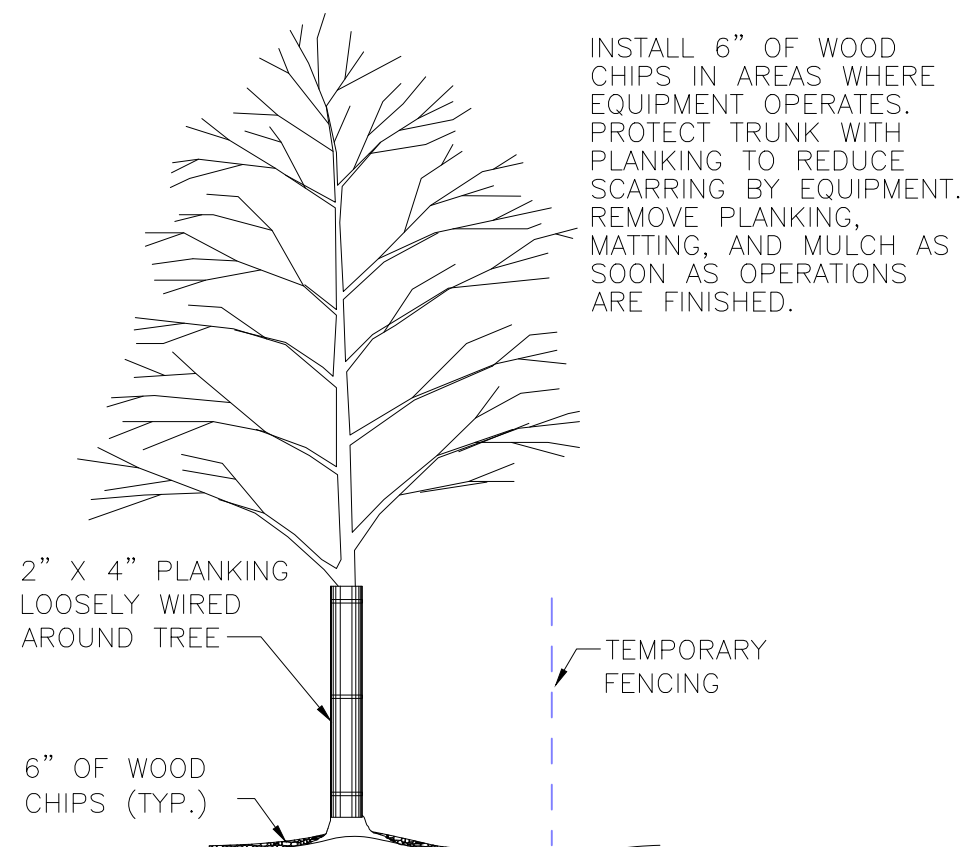
NOTES:

1. THE LINER SHALL BE PLACED ON BOTTOM OF WATERWAY W/EXCESS LINER EXTENDING OUT OF THE COFFERED AREA. ONCE STONE IS PLACED, LINER WILL BE PULLED OVER ROCK AND EXTEND BEYOND THE PILE ON THE DOWNSTREAM SIDE. SANDBAGS WILL SECURE THE EXCESS LINER AS SHOWN. REFER TO THE STANDARD FOR LINER SPECIFICATIONS.

REFERENCE  
Project \_\_\_\_\_  
Designed \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_

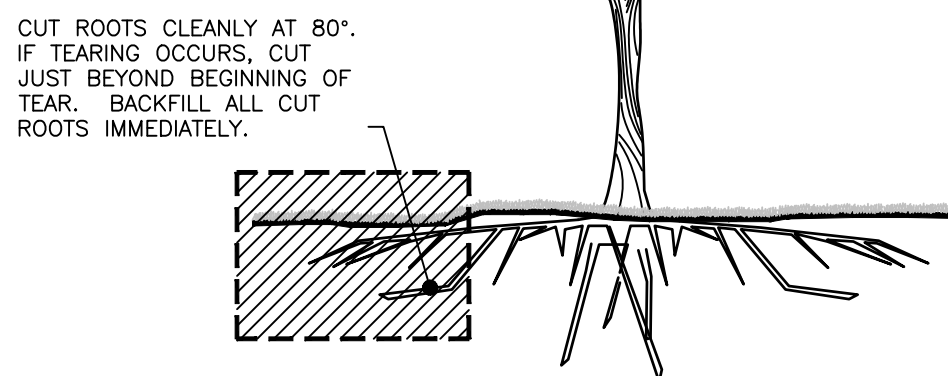


STANDARD DWG. NO.  
IUM-503RF  
SHEET 5 OF 7  
DATE 7-09-2012



#### TYP. TREE TRUNK PROTECTION DETAIL

SCALE: NTS



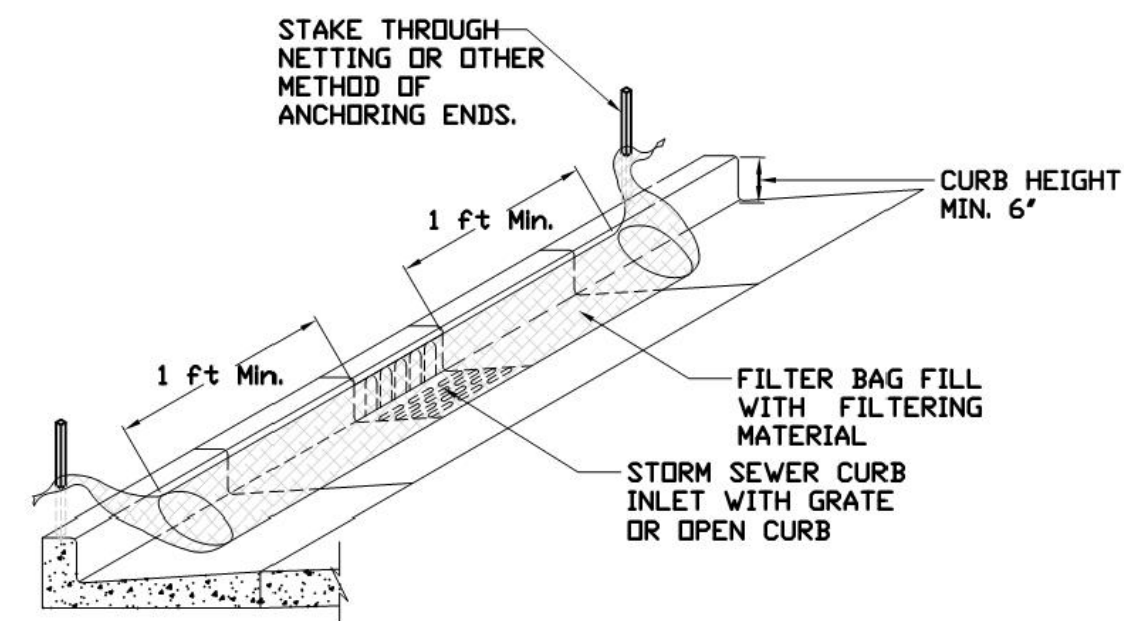
#### TYP. ROOT PRUNING DETAIL

SCALE: NTS

FOR BID  
NOT FOR CONSTRUCTION



IP INLET PROTECTION - PAVED AREAS  
CURB PROTECTION

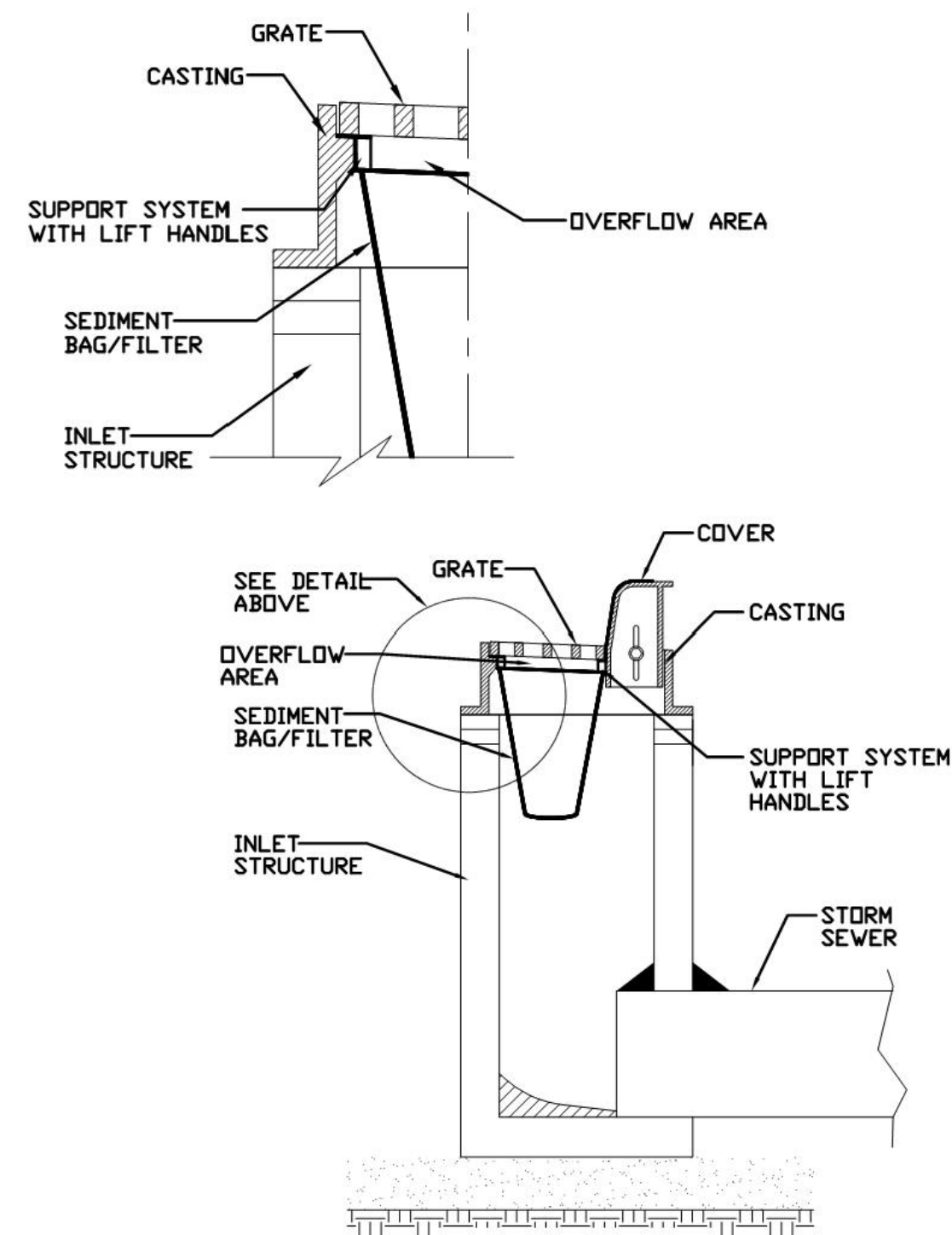


REFERENCE  
Project \_\_\_\_\_  
Designed \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



STANDARD DWG. NO.  
**IUM-561C**  
SHEET 1 OF 1  
DATE 01-11-11

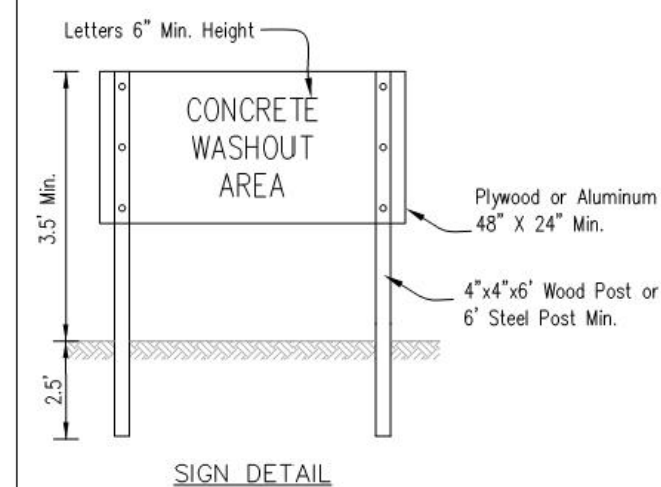
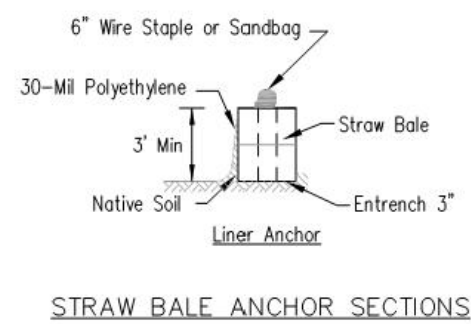
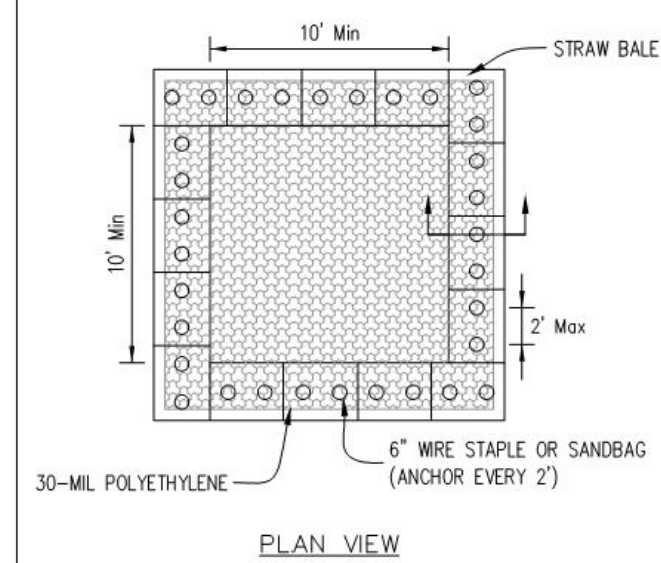
IP FB INLET PROTECTION - PAVED AREAS  
DROP-IN PROTECTION



REFERENCE  
Project \_\_\_\_\_  
Designed \_\_\_\_\_  
Checked \_\_\_\_\_  
Approved \_\_\_\_\_



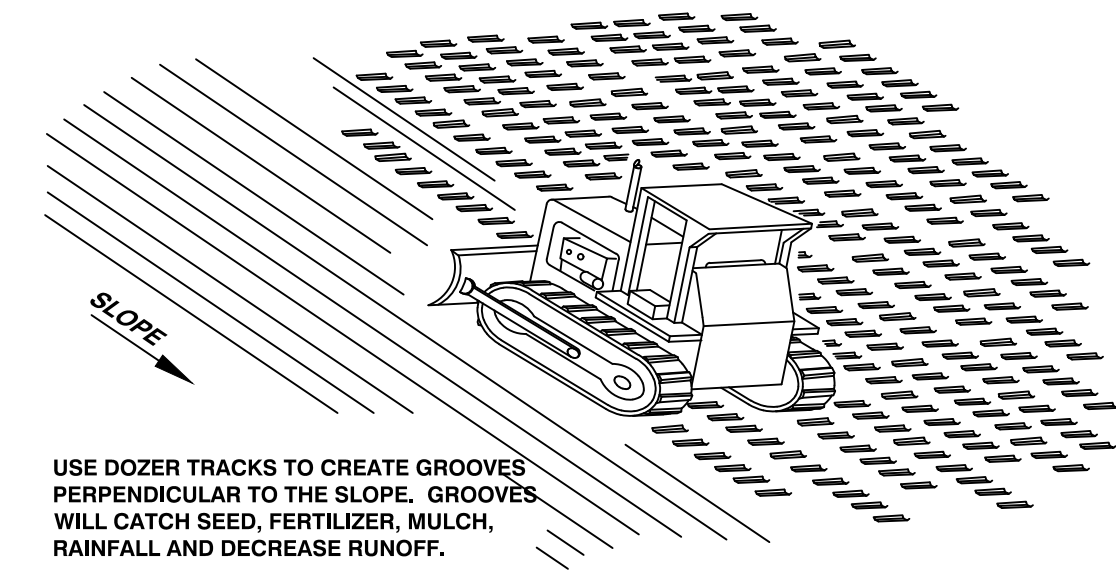
STANDARD DWG. NO.  
**IUM-561D**  
SHEET 1 OF 1  
DATE 01-11-11



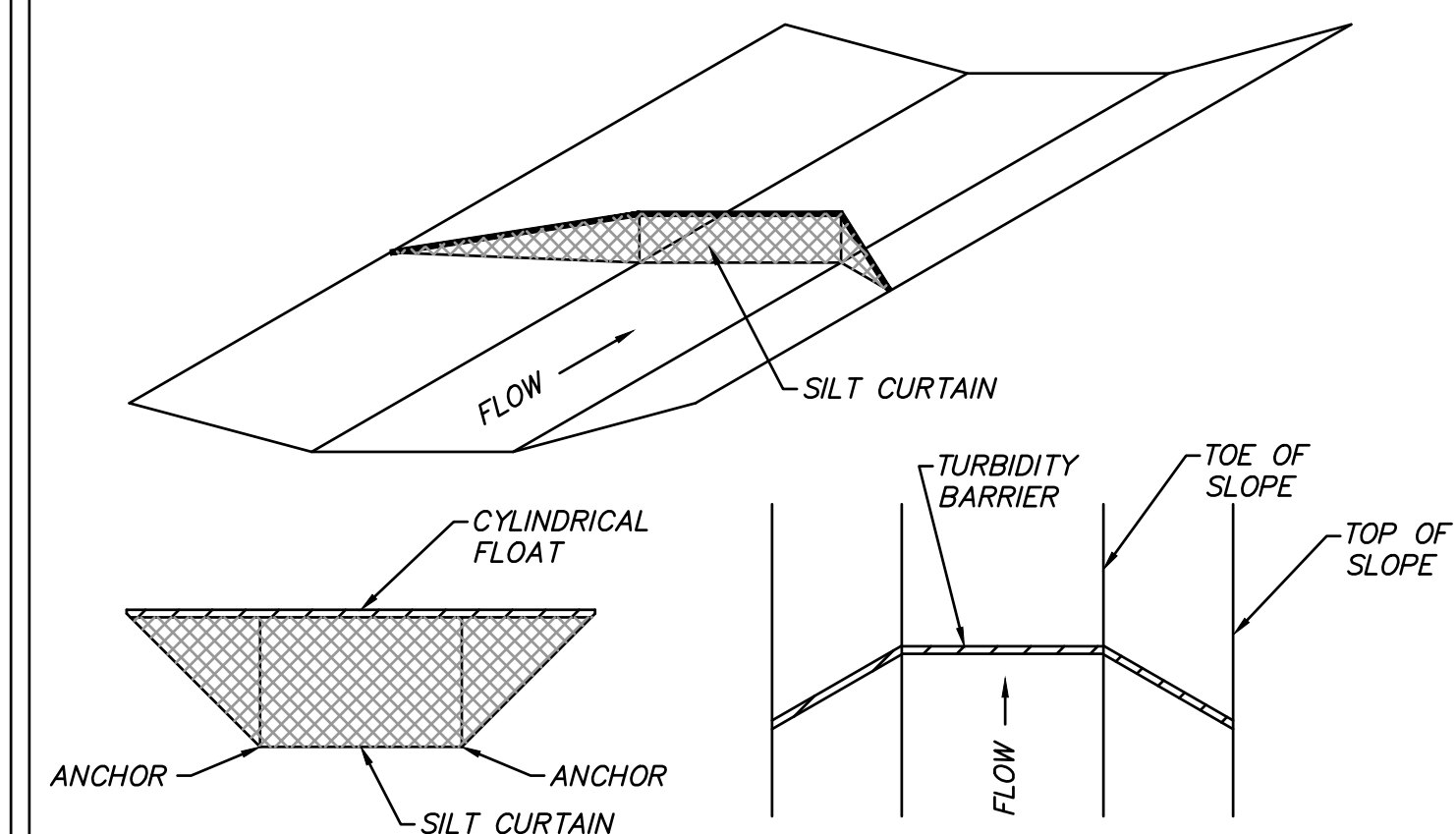
- NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
  2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.
  3. Each straw bale is to be staked in place using (2) 2"x2"x4' wooden stakes.

TEMPORARY CONCRETE  
WASHOUT FACILITY - STRAW BALE

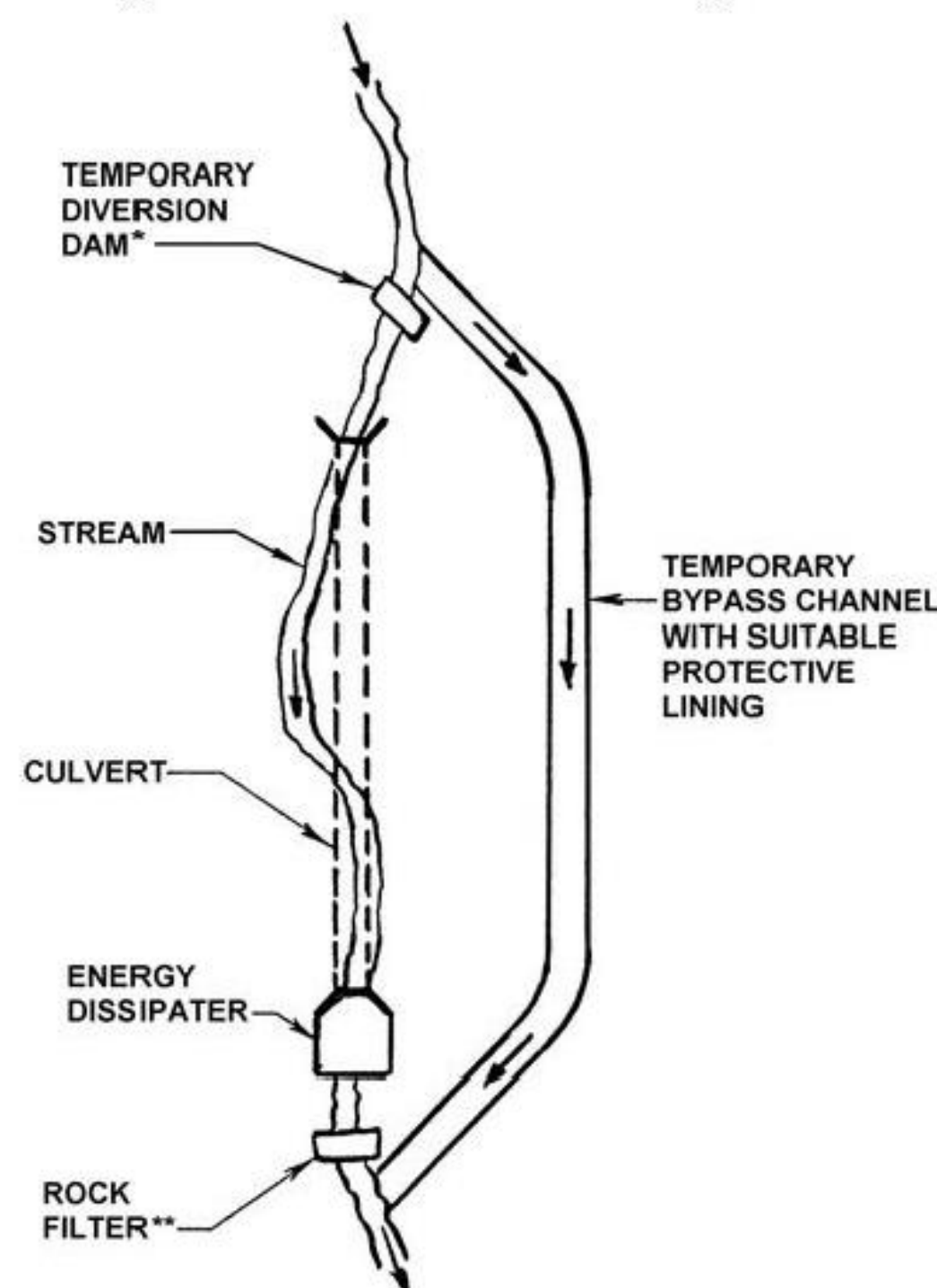
TRACKING DETAIL



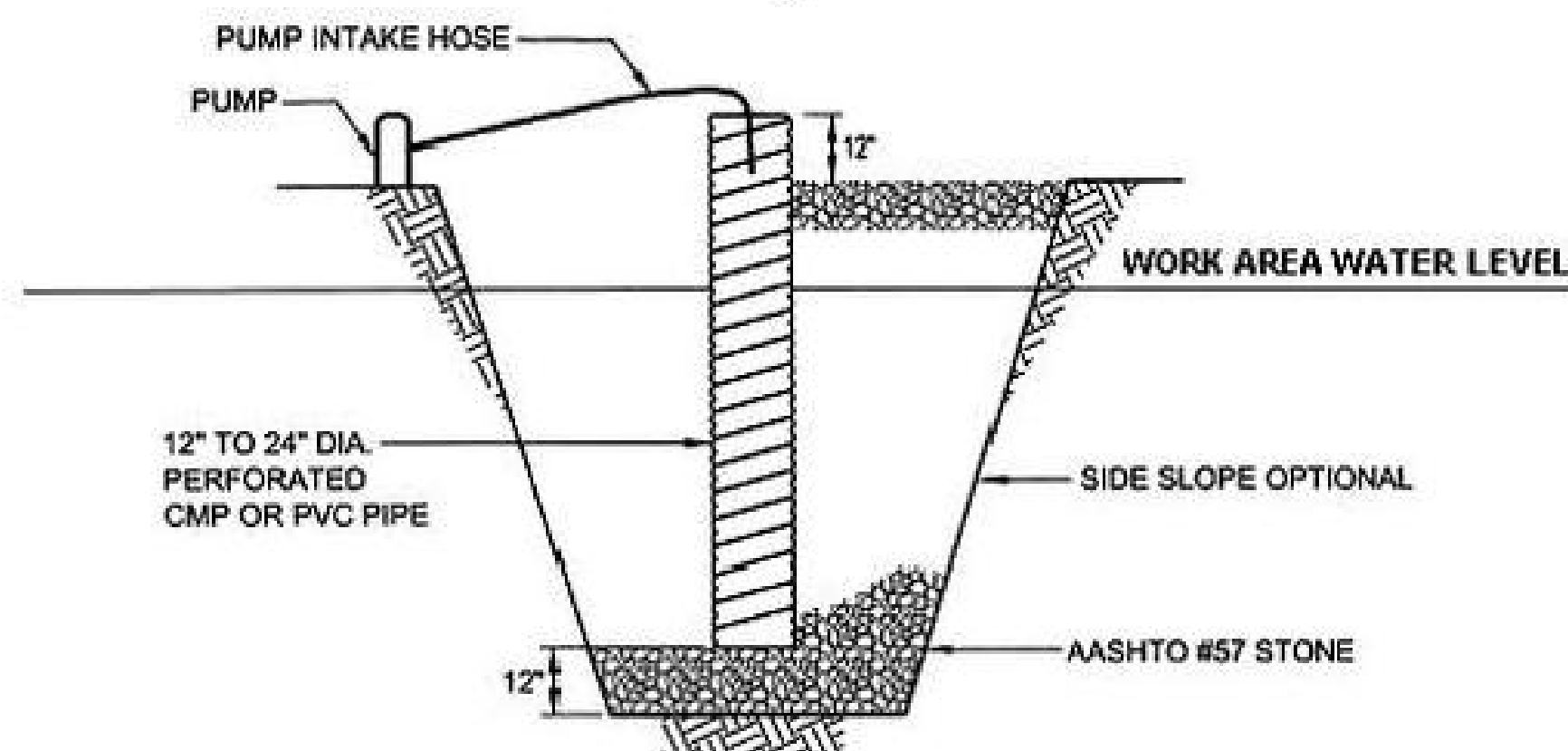
TEMPORARY TURBIDITY BARRIER DETAIL



Bypass Channel with Non-Erosive Lining



Sump Pit



DRAWN BY: MRJ/MPL JOB DATE: 10/25/2016  
APPROVED: AJ JOB NUMBER: 86140185.02  
CAD DATE: 7/31/2018 11:10:46 AM  
CAD FILE: J:\2014\86140185.06\CAD\DWGS\C\86140185.06-Details.dwg

BAR IS ONE INCH ON  
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0" = 1"  
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NO.	DATE	BY	REVISION DESCRIPTION

ILLINOIS DESIGN FIRM # 184.001322  
420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805  
FAX: 815.385.1781 | HRGreen.com

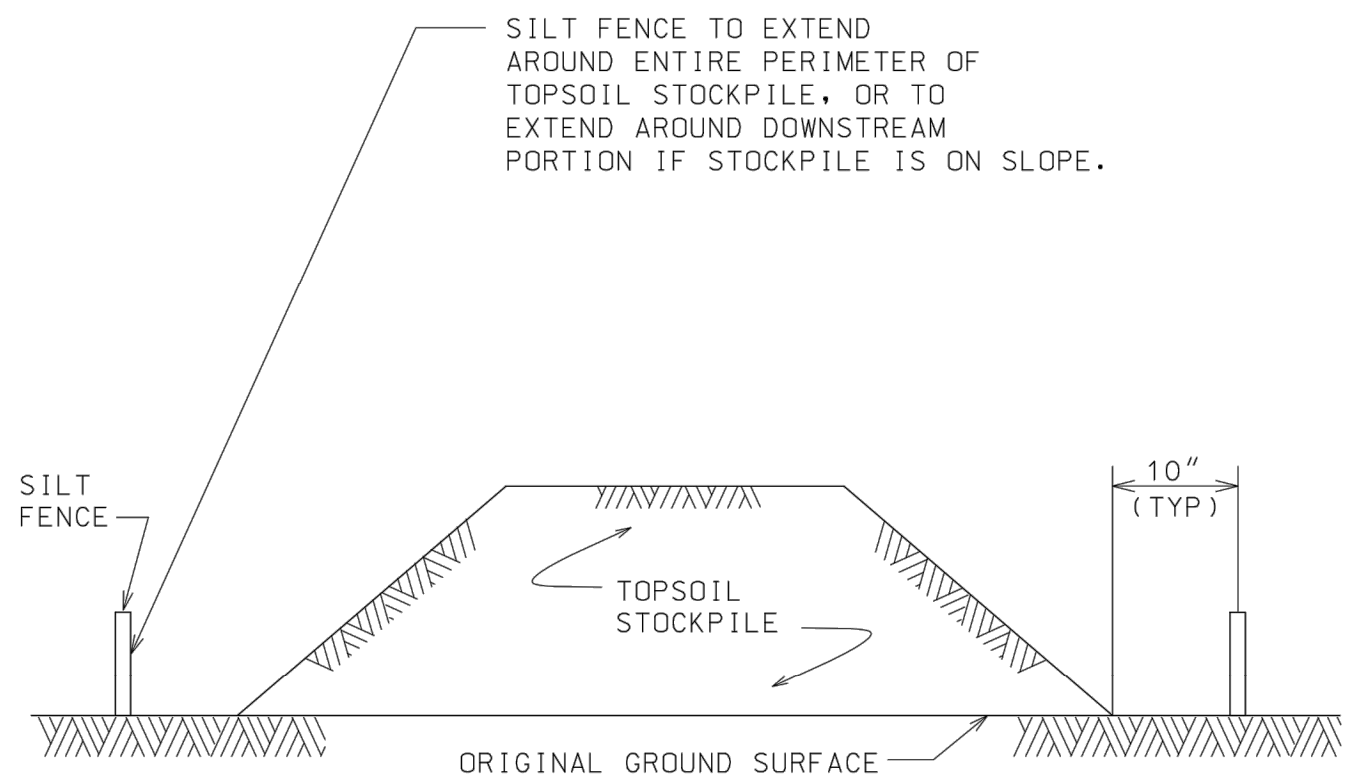
7TH AVENUE CREEK IMPROVEMENTS  
CITY OF ST. CHARLES  
KANE COUNTY, IL

DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND  
ALTERNATE BIDS)  
EROSION CONTROL DETAILS

SHEET NO.  
**EC-04**

FOR BID  
NOT FOR CONSTRUCTION





NOTES:

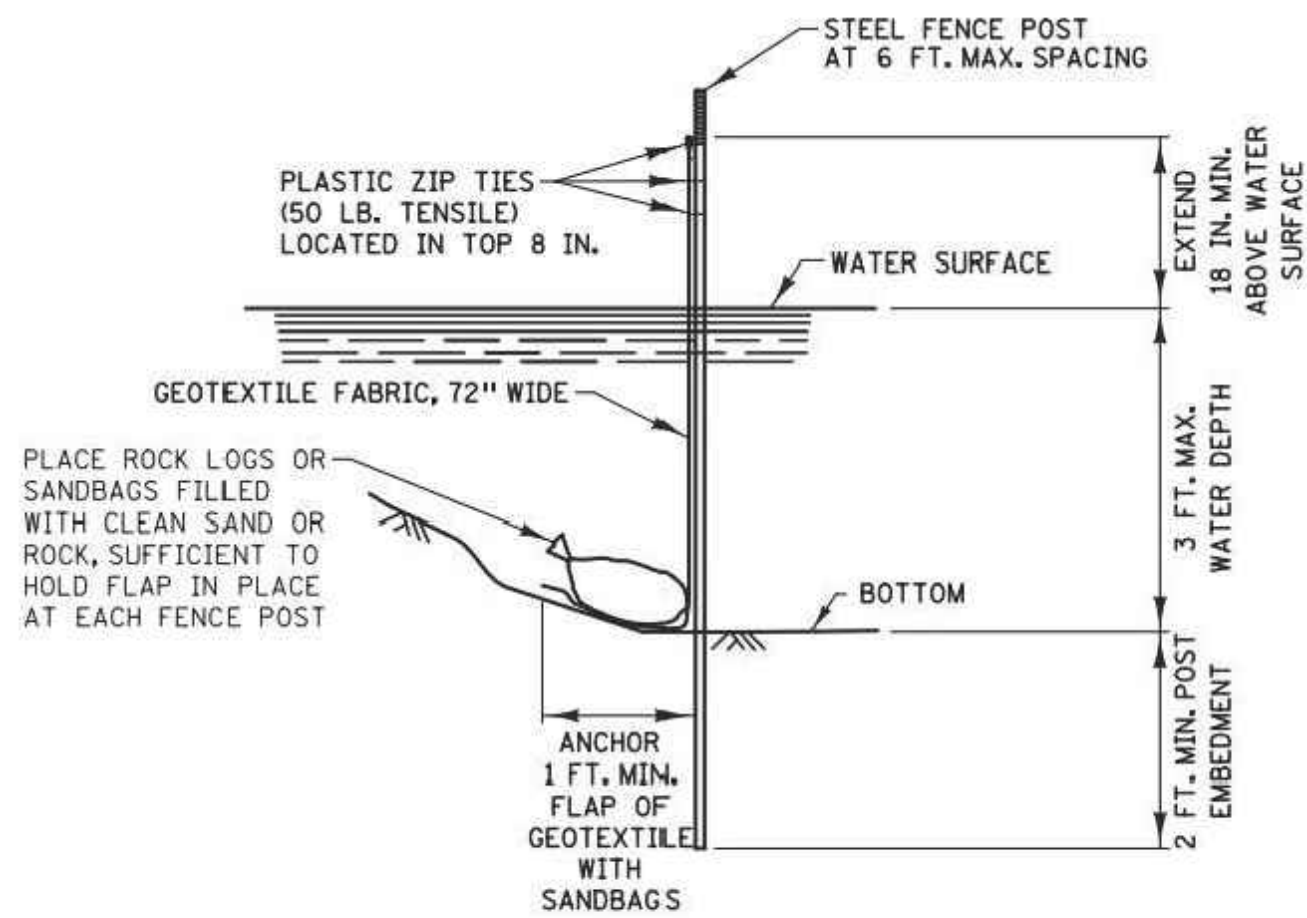
1. AN ON-SITE DRAINAGE SWALE SHALL BE LOCATED BETWEEN THE TOPSOIL STOCKPILE AND OFF-SITE PROPERTY.
2. REFERENCE IS MADE TO THE SILT FENCE DETAIL FOR MATERIALS AND INSTALLATION METHODS.
3. IF THE STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, IT SHALL BE STABILIZED WITH BURLAP MATTING OR SEEDED WITHIN 7 DAYS OF COMPLETION TO MINIMIZE EROSION.
4. INSPECTION OF SILT FENCES SHALL BE AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF 1/2". REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. SEDIMENT TRAPPED BY THE FENCES SHALL BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.
6. SILT FENCES SHALL BE MAINTAINED IN PLACE UNTIL TOPSOIL STOCKPILE HAS BEEN ELIMINATED AND SHALL BE REMOVED ONLY WHEN DIRECTED BY THE CITY.

NOT TO SCALE

TEMPORARY  
TOPSOIL  
STOCKPILE  
DETAIL

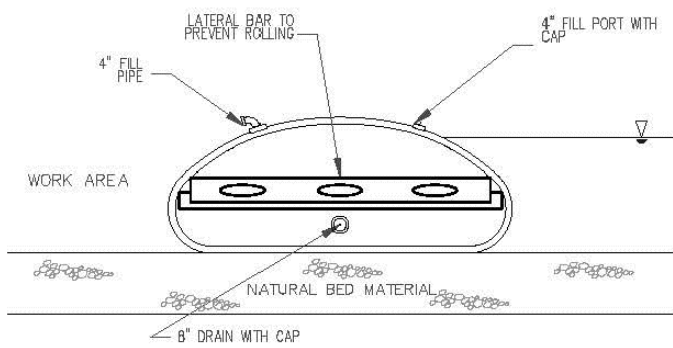
DATE: 3-31-09

F-3



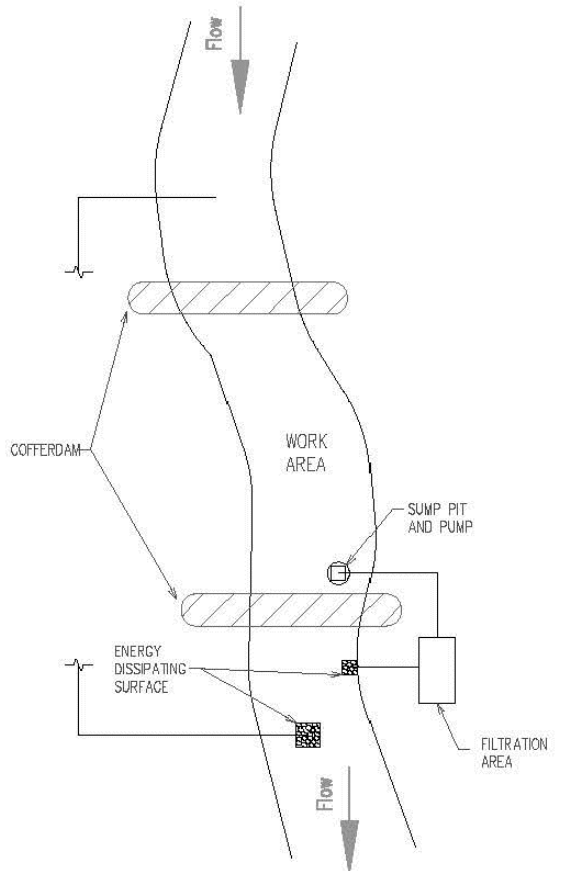
TURBIDITY BARRIER  
(SILT FENCE TYPE TB)

BLADDER COFFERDAM



COFFERDAM PROFILE

PLAN VIEW



NOTES:

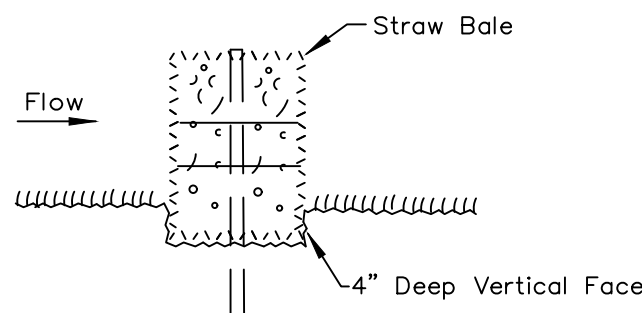
1. ALL DISCHARGES SHOULD BE ON ENERGY DISSIPATING SURFACES.
2. LOCATIONS FOR THE SUMP PIT, FILTRATION AREA, AND ENERGY DISSIPATING SURFACES MAY VARY DEPENDING ON SITE CONDITIONS.

REFERENCE	Project	_____	Date	_____
Designed	_____	Date	_____	_____
Checked	_____	Date	_____	_____
Approved	_____	Date	_____	_____

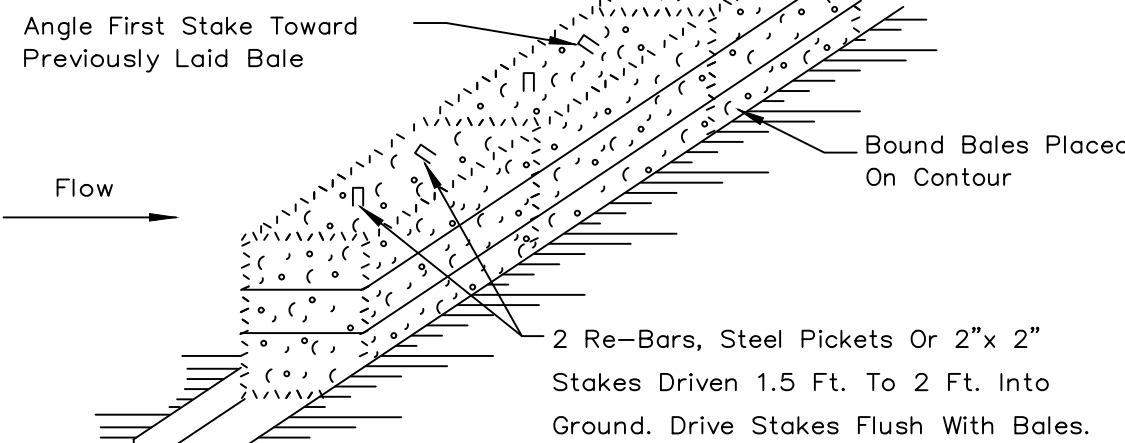


STANDARD DWG. NO.  
IUM-503BF  
SHEET 3 OF 7  
DATE 7-09-2006

STRAW BALE BARRIER PLAN



BEDDING DETAIL



ANCHORING DETAIL

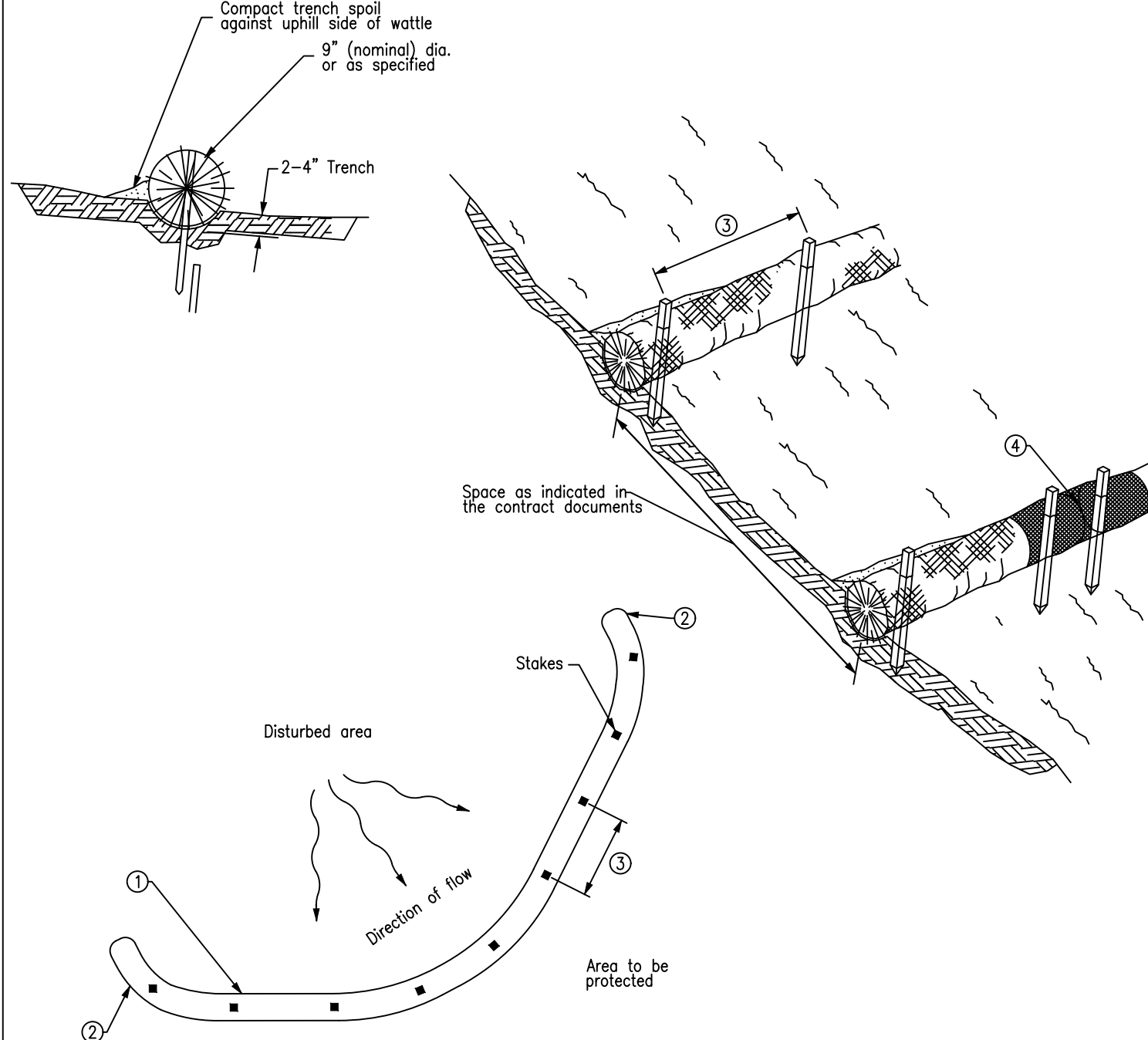
NOTES

1. Bales shall be placed at the top of slope or on the contour and in a row with ends tightly abutting the adjacent bales.
2. Each bale shall be embedded in the soil a minimum of 4", and placed so that bindings are horizontal.
3. Bales shall be securely anchored in place by either two stakes or re-bars driven through the bale. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Stakes shall be driven flush with the bales.
4. Inspection shall be frequent and repair replacement shall be made promptly as needed.
5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

REFERENCE	Project	_____	Date	_____
Designed	_____	Date	_____	_____
Checked	_____	Date	_____	_____
Approved	_____	Date	_____	_____



STANDARD DWG. NO.  
IL-635  
SHEET 1 OF 1  
DATE 8-18-94



1. Install wattle along contour of slope.
2. Turn ends of wattle uphill to prevent water from flowing around ends.
3. Space stakes at 4 ft. max. Install additional stakes as necessary to prevent movement and undermining.
4. Abut ends of adjacent wattles tightly. Wrap joint with 36 in. wide section of silt fence and secure with stakes.

REVISION NO.	_____
REVISION DATE	10/17/06
SHEET 1 OF 1	_____

FIGURE: 9040.5

WATTLE

DRAWN BY: MRJ/MPL JOB DATE: 10/25/2016  
APPROVED: AJ JOB NUMBER: 86140185.02  
CAD DATE: 7/31/2018 11:10:46 AM  
CAD FILE: J:\2014\86140185.06\CAD\DWGS\C\86140185.06-Details.dwg

BAR IS ONE INCH ON OFFICIAL DRAWINGS.  
0 1" IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION



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420 N. FRONT STREET, SUITE 100  
McHENRY, ILLINOIS 60050  
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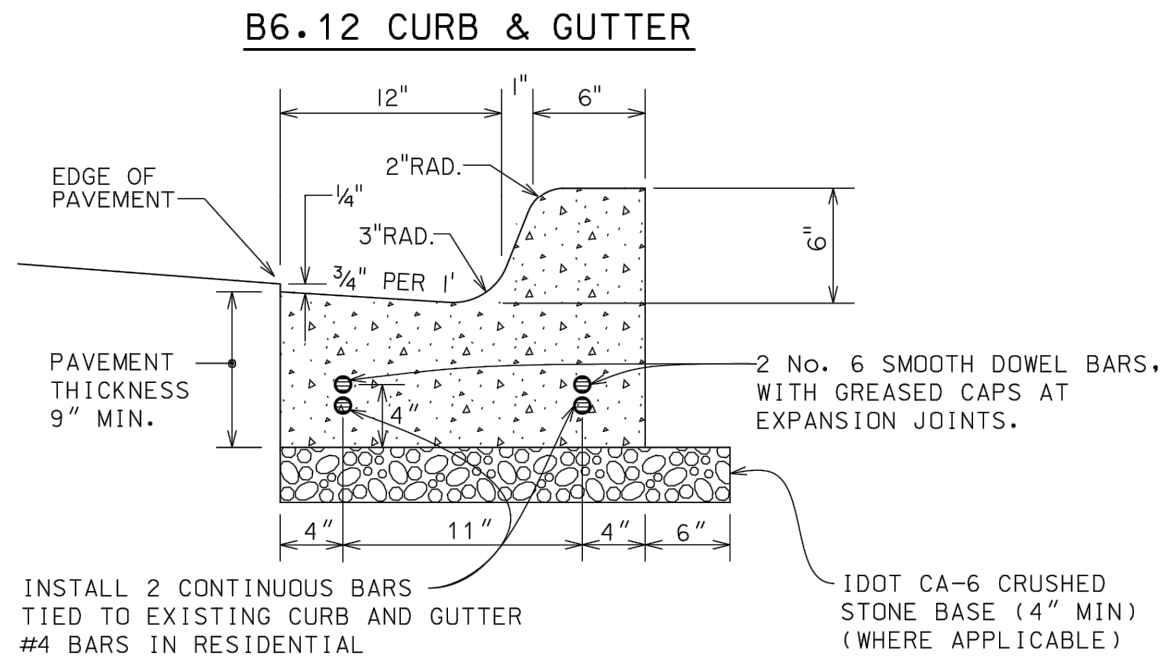
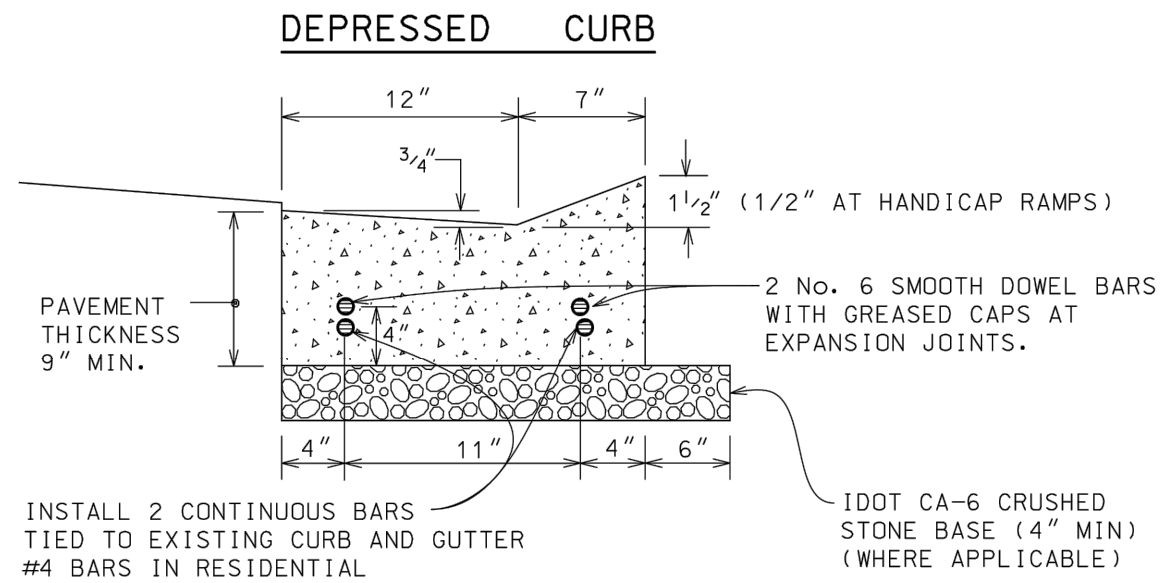
7TH AVENUE CREEK IMPROVEMENTS  
CITY OF ST. CHARLES  
KANE COUNTY, IL

DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND ALTERNATE BIDS)  
EROSION CONTROL DETAILS

SHEET NO.  
EC-05

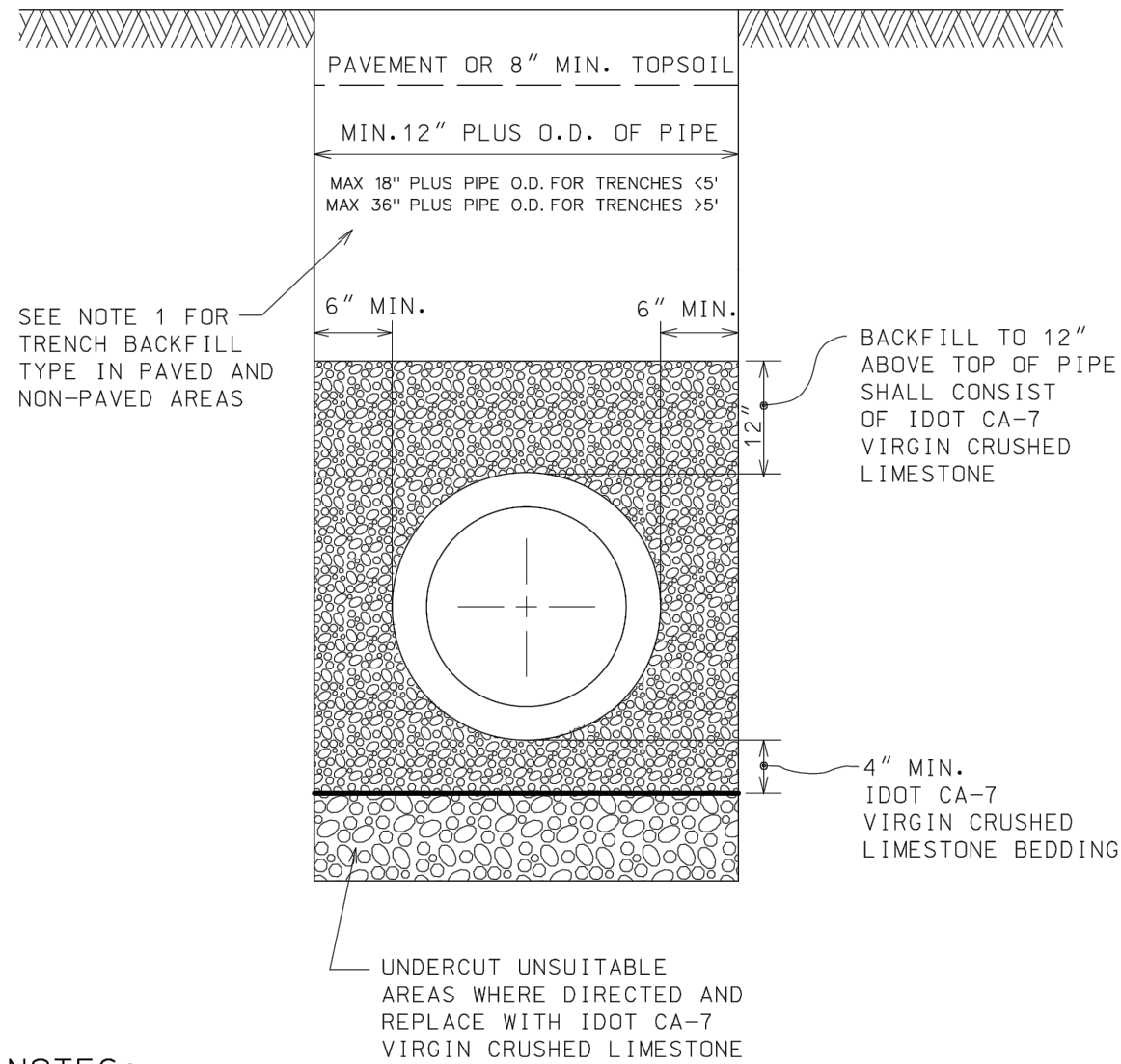
FOR BID  
NOT FOR CONSTRUCTION





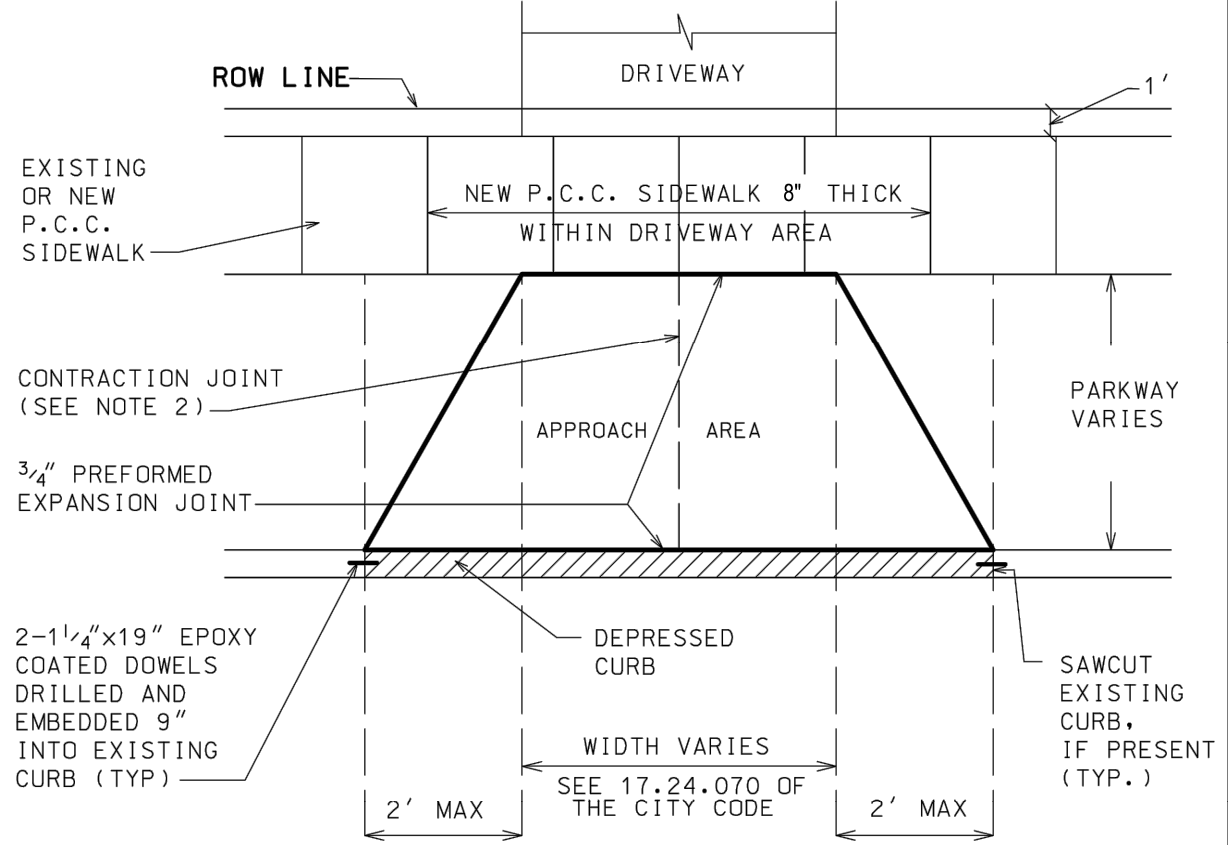
- NOTES:**
- CONTRACTION JOINTS SHALL BE PLACED AT 15' INTERVALS, AND SHALL BE FORMED BY SAW CUTTING TO A DEPTH OF AT LEAST TWO INCHES.
  - EXPANSION JOINTS SHALL BE PLACED AT 60' (MAX) INTERVALS, AT ALL POINTS OF CURVATURE, AND AT THE END OF EACH POUR.

**FOR RESIDENTIAL STREETS ONLY** DATE: 2-27-17  
NOT TO SCALE  
**B6.12 COMB. CONCRETE CURB AND GUTTER (SPECIAL)**  
**B6.12 P.C.C. INTEGRAL CURB AND GUTTER (SPECIAL)**



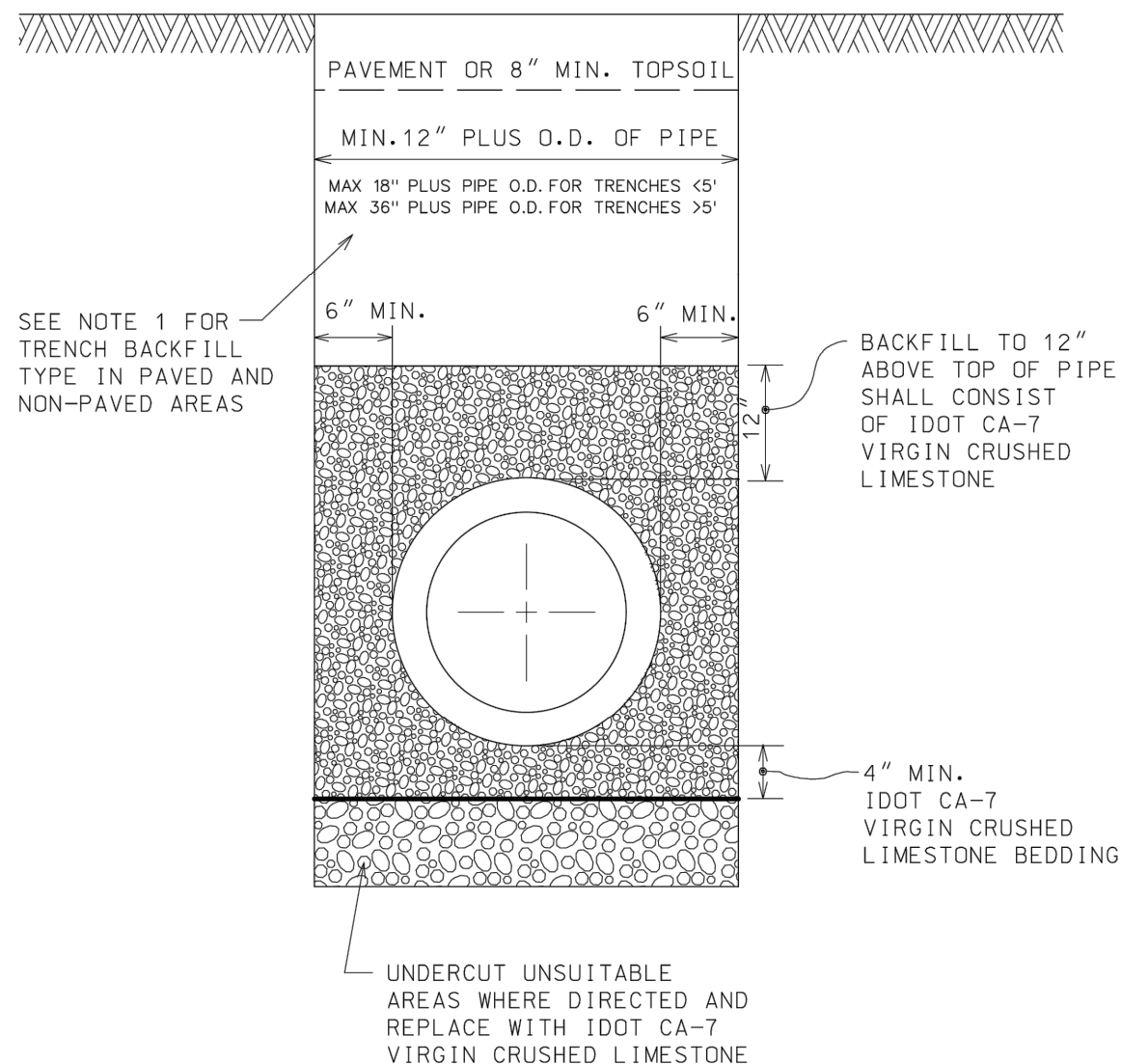
- NOTES:**
- TRENCH BACKFILL MATERIAL SHALL CONSIST OF CA-7 (VIRGIN CRUSHED LIMESTONE) UNDER PAVED AREAS OR WITHIN ZONE OF INFLUENCE, OR FA-6 (CLEAN BROWN BEACH SAND) IN NON-PAVED AREAS.
  - ALL MATERIALS SHALL BE PROPERLY COMPACTED PER SPECIFICATIONS (INUNDATION OR WATER JETTING NOT ALLOWED)
  - ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
  - ALL STORM SEWER SMALLER THAN 15" DIA. THAT WILL BE PUBLICLY OWNED & MAINTAINED SHALL BE RIGID PVC PIPE, MINIMUM SDR 26 WITH PUSH-ON GASKET JOINTS.

**RCP & DIP TRENCH DETAIL** DATE: 3-26-13  
NOT TO SCALE



- NOTES:**
- FOR P.C.C. DRIVEWAY OVER AN UNDERGROUND UTILITY TRENCH, PLACE 6X6 - W2.9XW2.9 WELD AND WIRE FABRIC AT MID-DEPTH OF THE CONCRETE.
  - FOR CONCRETE APPROACH WIDER THAN 16', A CONTRACTION JOINT SHALL BE LOCATED ALONG THE CENTERLINE.
  - P.C.C. CONCRETE DRIVEWAYS:  
APPROACH- 8" (MIN) PORTLAND CEMENT CONCRETE AND 4" (MIN) IDOT CA-6 CRUSHED STONE  
DRIVEWAY- 8" (MIN) PORTLAND CEMENT CONCRETE AND 4" (MIN) IDOT CA-6 CRUSHED STONE
  - BITUMINOUS DRIVEWAYS:  
APPROACH- 6" (MIN) IDOT CA-6 CRUSHED STONE AND 3" (MIN) BITUMINOUS CONCRETE  
DRIVEWAY- 4" (MIN) IDOT CA-6 CRUSHED STONE AND 3" (MIN) BITUMINOUS CONCRETE
  - BRICK PAVERS OR OTHER ARCHITECTURAL PAVING MATERIALS ARE NOT ALLOWED IN A DRIVEWAY APPROACH AREA WITHOUT A RIGHT OF WAY PERMIT AND A COVENANT RUNNING WITH THE LAND.
  - MAINTAIN FULL SIDEWALK WIDTH THROUGH DRIVEWAYS UNLESS DIRECTED OTHERWISE BY CITY ENGINEER. CURBING SHALL NOT RUN THROUGH SIDEWALK AREAS IN DRIVEWAYS.

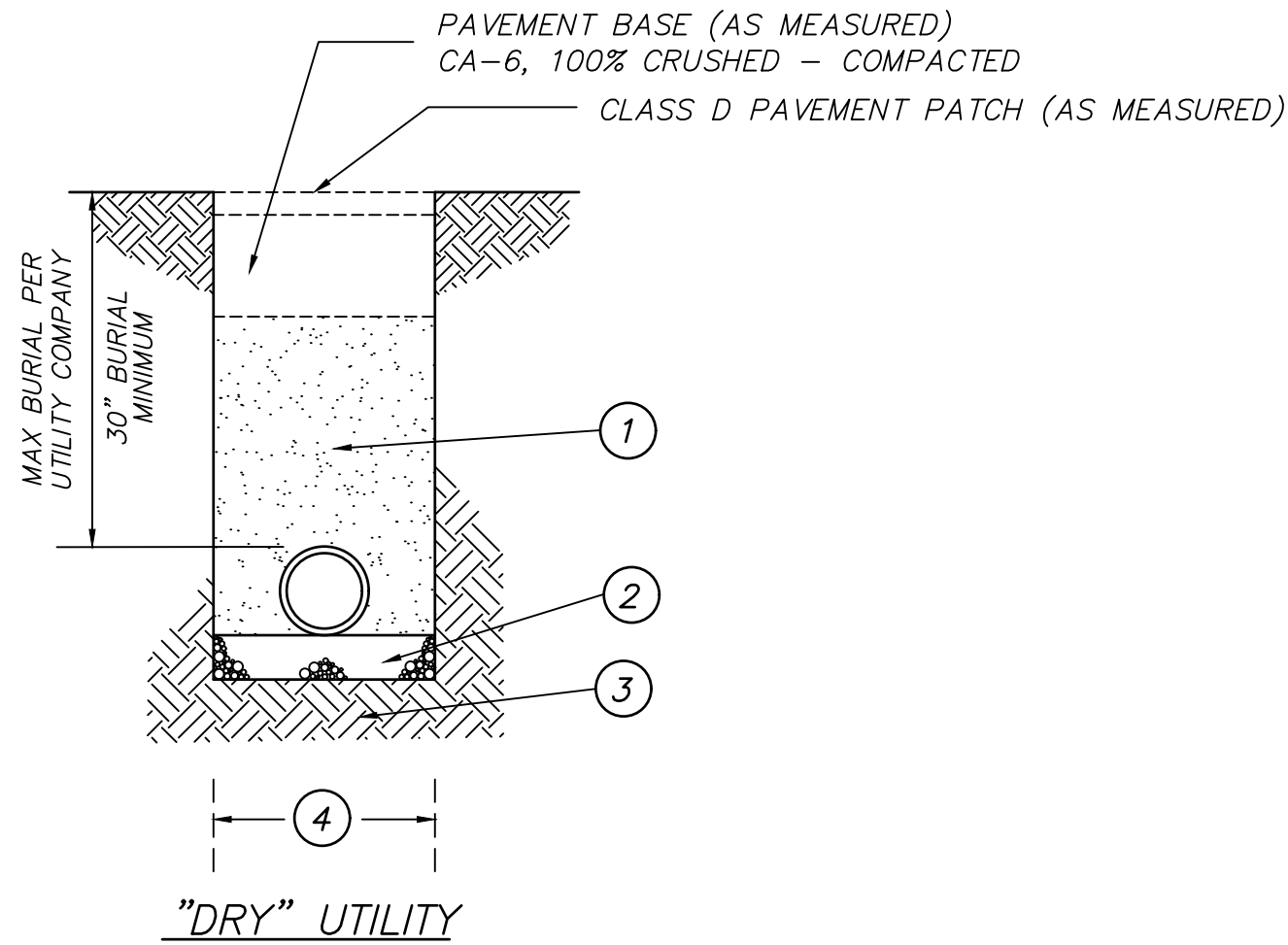
**HEAVY DUTY CONCRETE DRIVEWAY DETAIL FOR JOHN DEUTSCH DR** DATE: 11-1-13  
NOT TO SCALE



- NOTES:**
- TRENCH BACKFILL MATERIAL SHALL CONSIST OF CA-7 (VIRGIN CRUSHED LIMESTONE) UNDER PAVED AREAS OR WITHIN ZONE OF INFLUENCE, OR FA-6 (CLEAN BROWN BEACH SAND) IN NON-PAVED AREAS.
  - ALL MATERIALS SHALL BE PROPERLY COMPACTED PER SPECIFICATIONS (INUNDATION OR WATER JETTING NOT ALLOWED)
  - ALL TRENCH EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.
  - ALL STORM SEWER SMALLER THAN 15" DIA. THAT WILL BE PUBLICLY OWNED & MAINTAINED SHALL BE RIGID PVC PIPE, MINIMUM SDR 26 WITH PUSH-ON GASKET JOINTS.

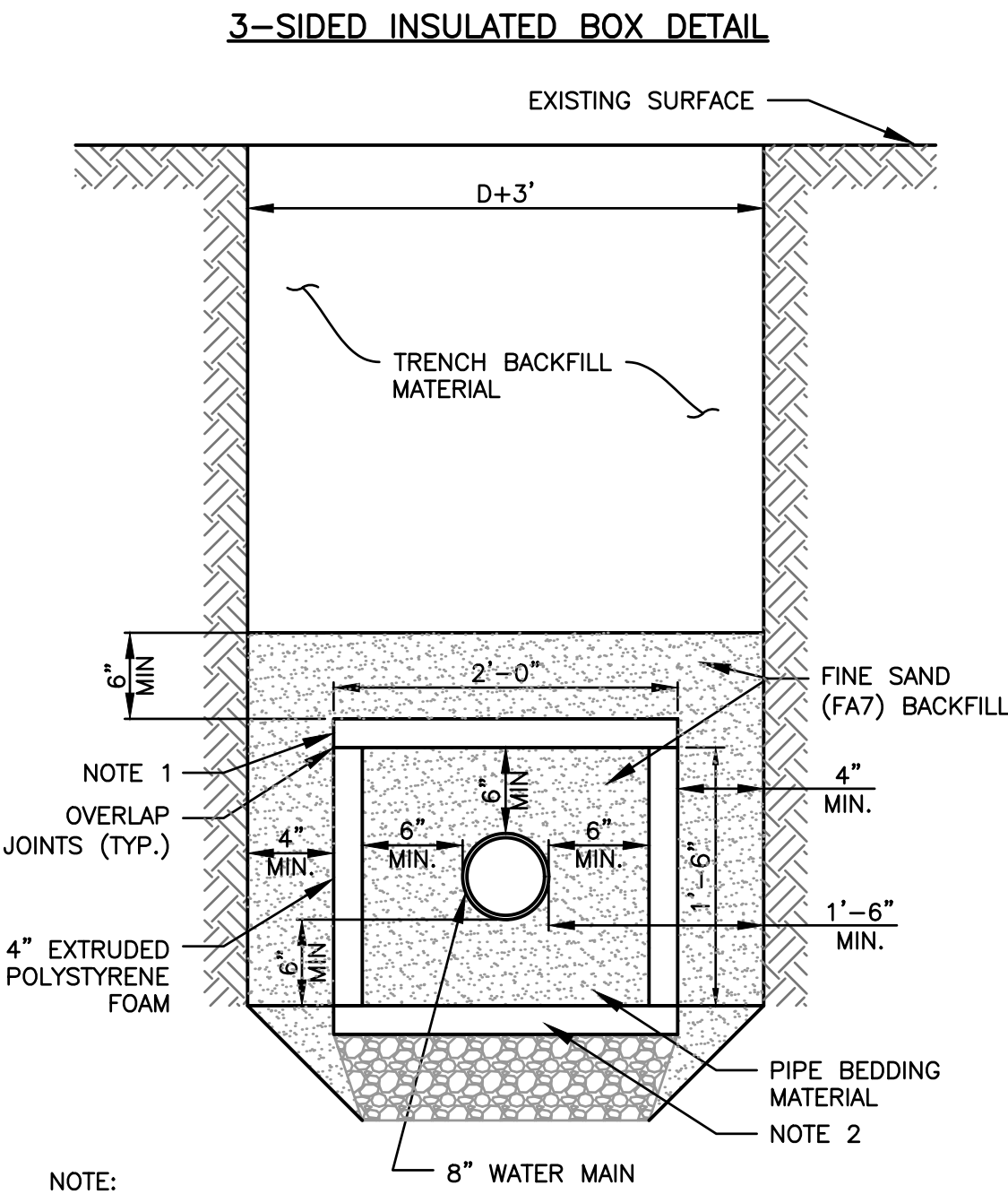
**PVC PIPE TRENCH DETAIL** DATE: 3-26-13  
NOT TO SCALE

**DRY UTILITY TRENCH DETAIL IN PAVED AREAS**

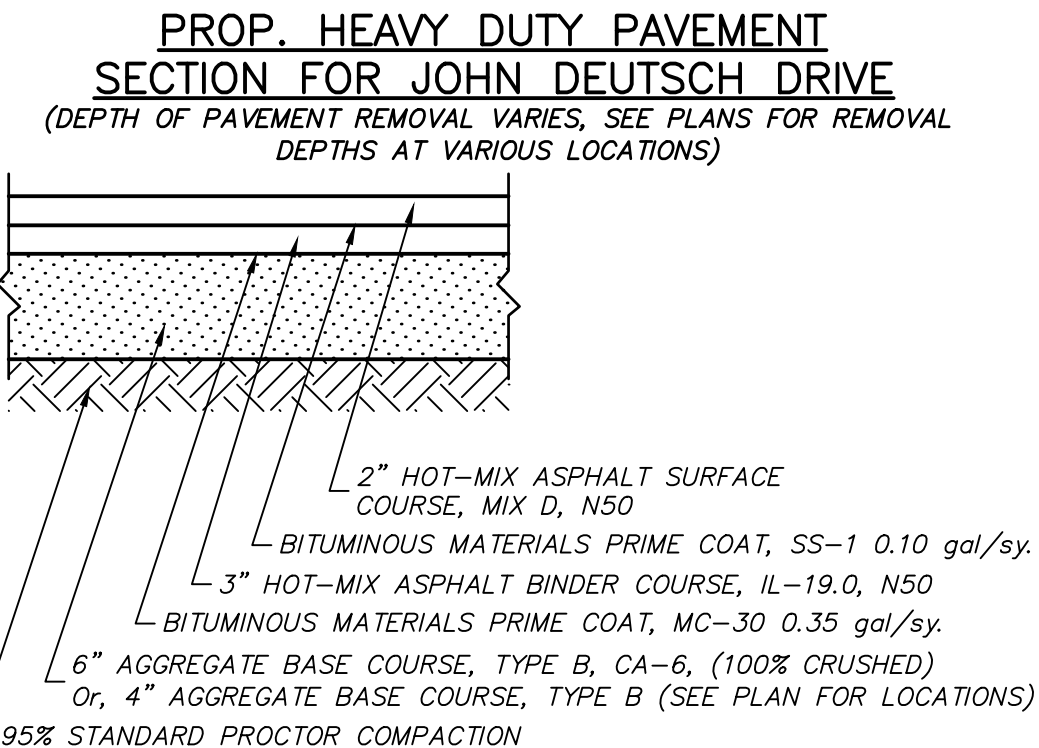
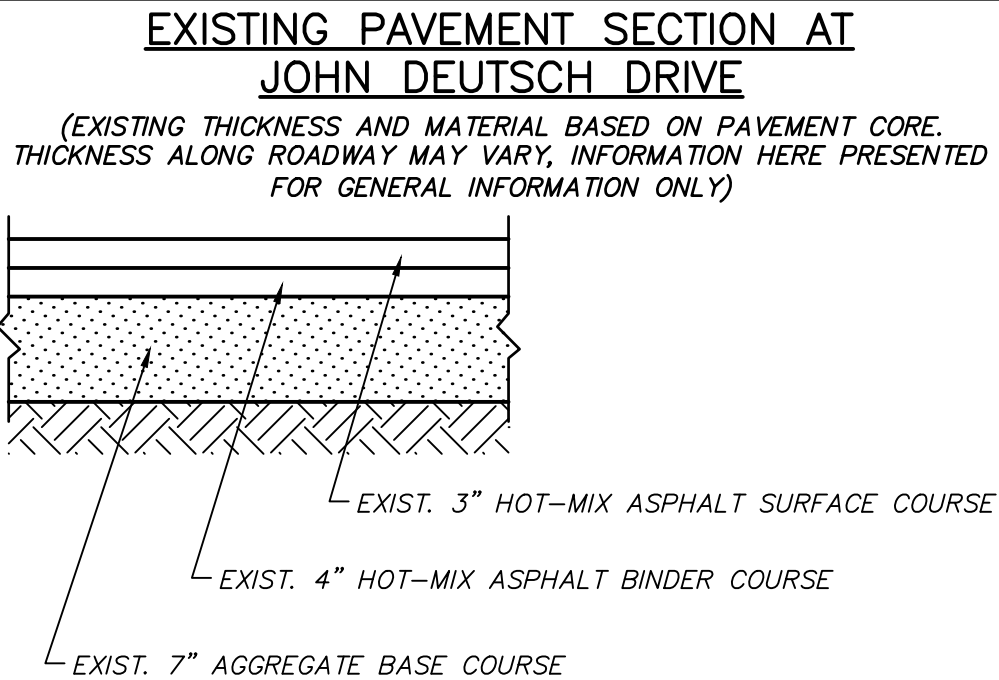


- OPTION 1**  
Trench backfill under pavement, curb and gutter as indicated in road subgrades and within 2 feet of any proposed curb and gutter or sidewalk. Mechanically compacted backfill - granular material CA-6 from conduit bedding to road base.
- OPTION 2**  
Trench backfill under pavement, curb and gutter as indicated in road subgrades and within 2 feet of any proposed curb and gutter or sidewalk. Mechanically compacted backfill, FA-6 (IDOT Article 208) from conduit bedding to road base.
- CONDUIT BEDDING**  
4" compacted granular bedding, CA-6, 100% Crushed
- 4" compacted granular bedding, FA-6
- Unsuitable material to be removed where directed by Engineer and replaced with suitable material and compacted.
- Trench Width - Pipe O.D. + 6" minimum  
Pipe O.D. + 12" maximum

- NOTES:**
- All CA-6 and FA-6 to be IDOT approved or meet IDOT specifications.



- NOTE:**
- INSULATION SHALL BE INSTALLED USING A BOX METHOD (SEE ABOVE). THE CLOSED CELL, SHALL BE FORMED WITH 4 INCH THICK EXTRUDED POLYSTYRENE FOAM (ASTM 578) INSULATION, MINIMUM 40 PSI. THE BOX SHALL BE FILLED WITH FINE SAND TYPE VI, 40 PSI, COMPRESSING STRENGTH (ASTM D1621) 0.1% MAX. WATER ABSORPTION (ASTM C272). FREE OF ROOTS OR ORGANIC MATERIAL.
  - IF LESS THAN 5'6" OF COVER TO GRADE ABOVE OR OPENING BELOW (SUCH AS A CULVERT) ADD INSULATION TO TOP & OR BOTTOM OF INSULATION BOX, WHERE MIN. COVER IS NOT MET.



DRAWN BY: MRJ/MPL JOB DATE: 10/25/2016 BAR IS ONE INCH ON OFFICIAL DRAWINGS.  
APPROVED: AJ JOB NUMBER: 86140185.02 0 1"  
CAD DATE: 7/31/2018 11:10:46 AM IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.  
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NO.	DATE	BY	REVISION DESCRIPTION

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McHENRY, ILLINOIS 60050  
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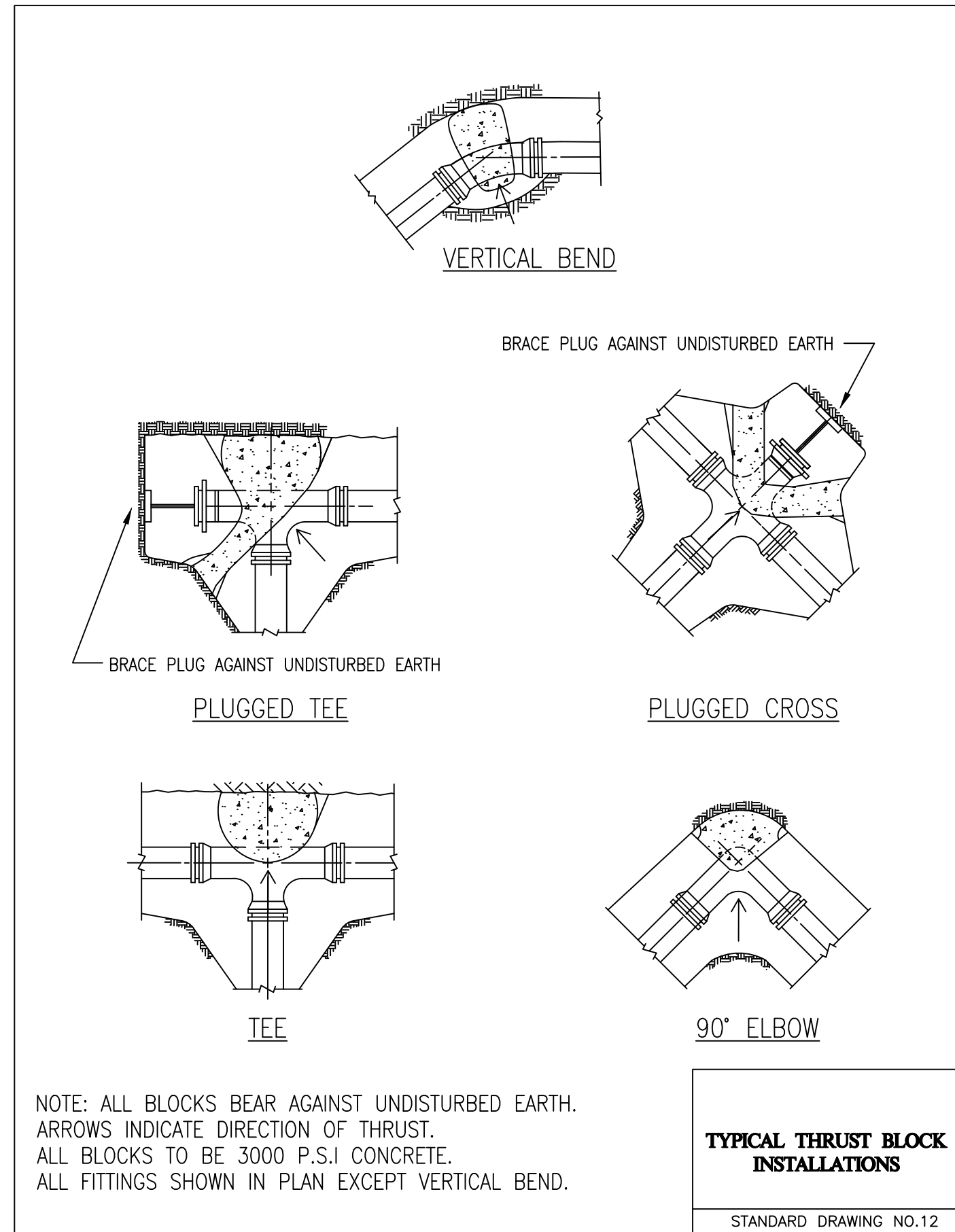
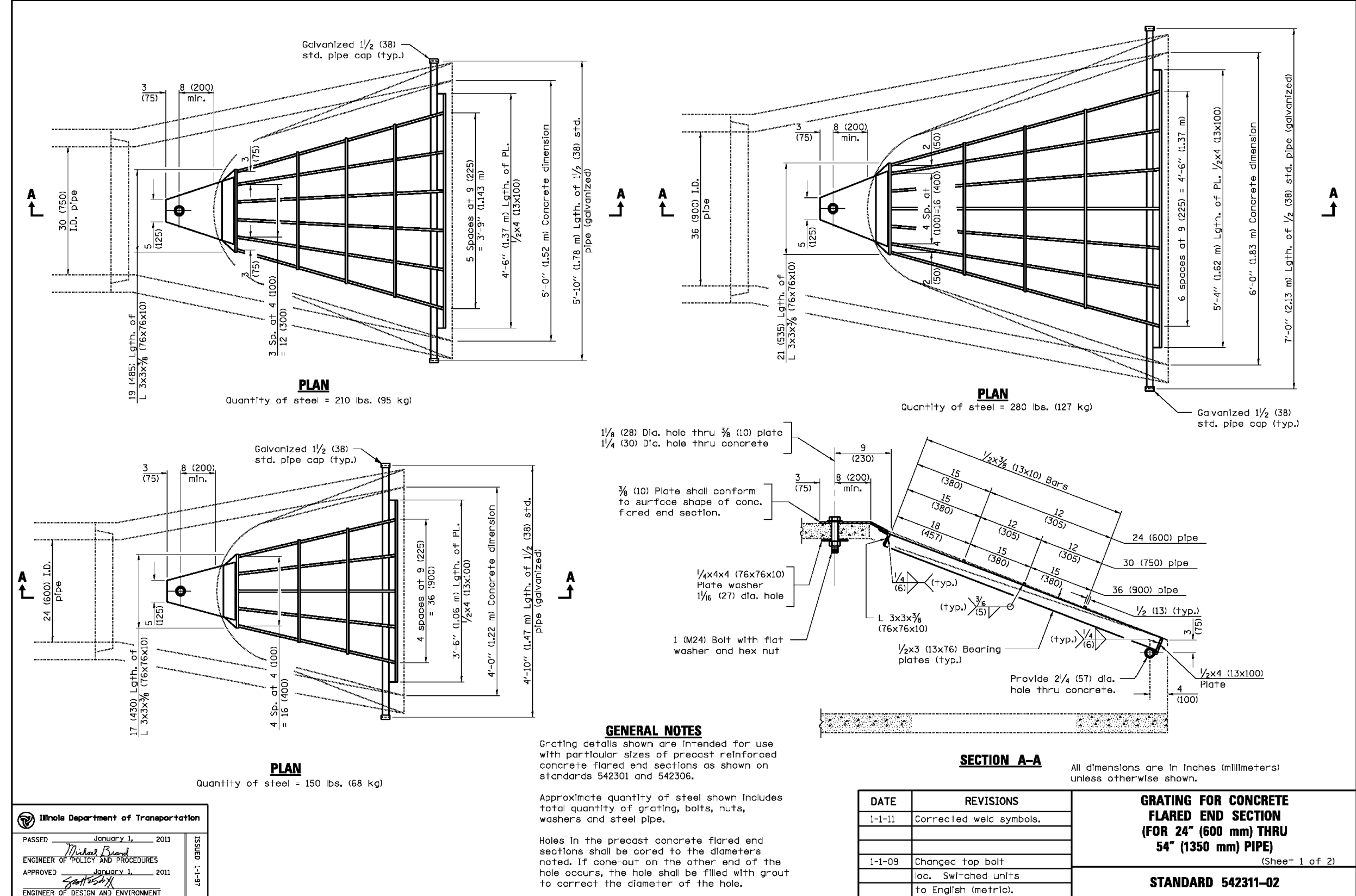
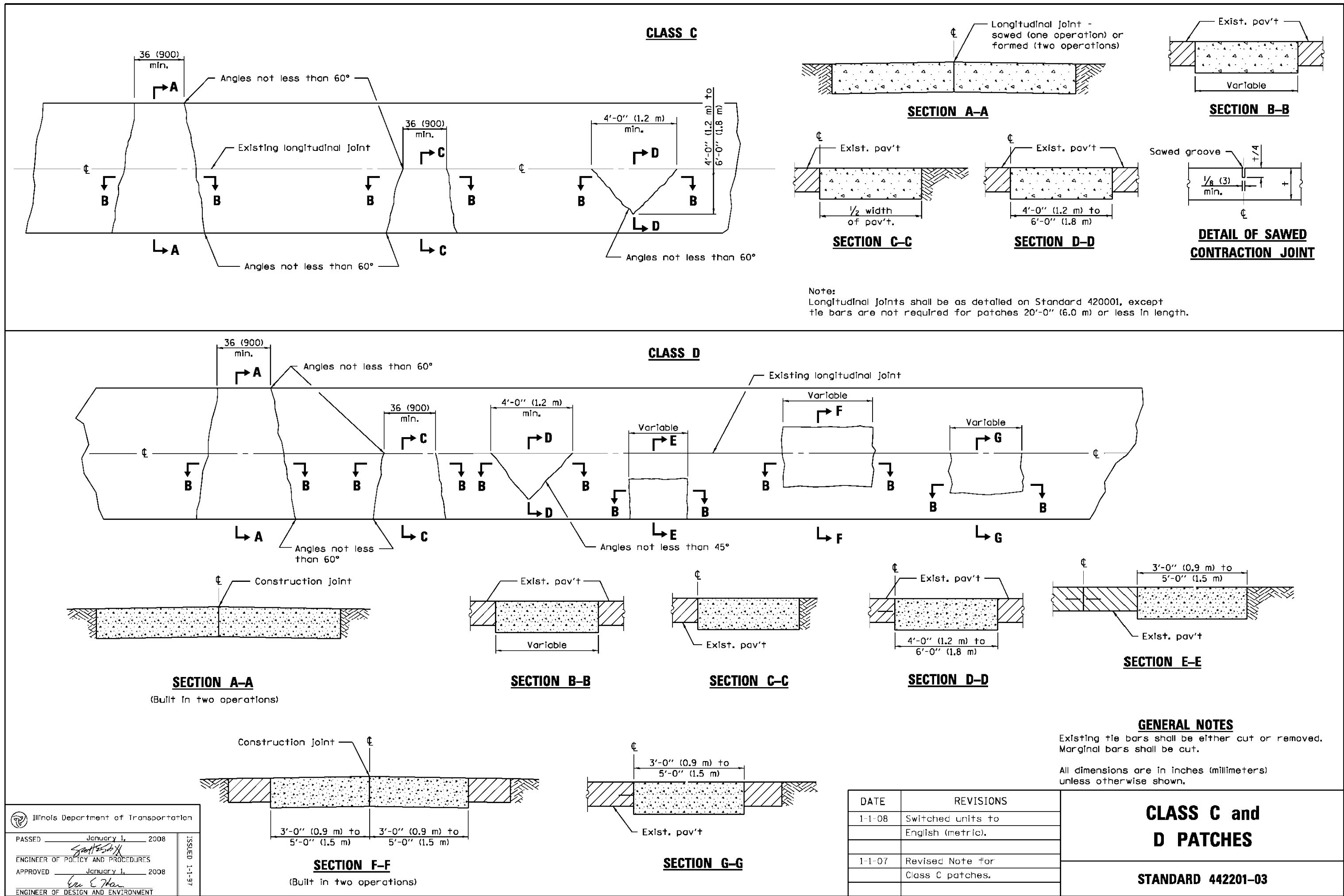
**7TH AVENUE CREEK IMPROVEMENTS**  
**CITY OF ST. CHARLES**  
**KANE COUNTY, IL**

DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND ALTERNATE BIDS)  
**STANDARD CONSTRUCTION DETAILS**

SHEET NO.  
**CD-01**

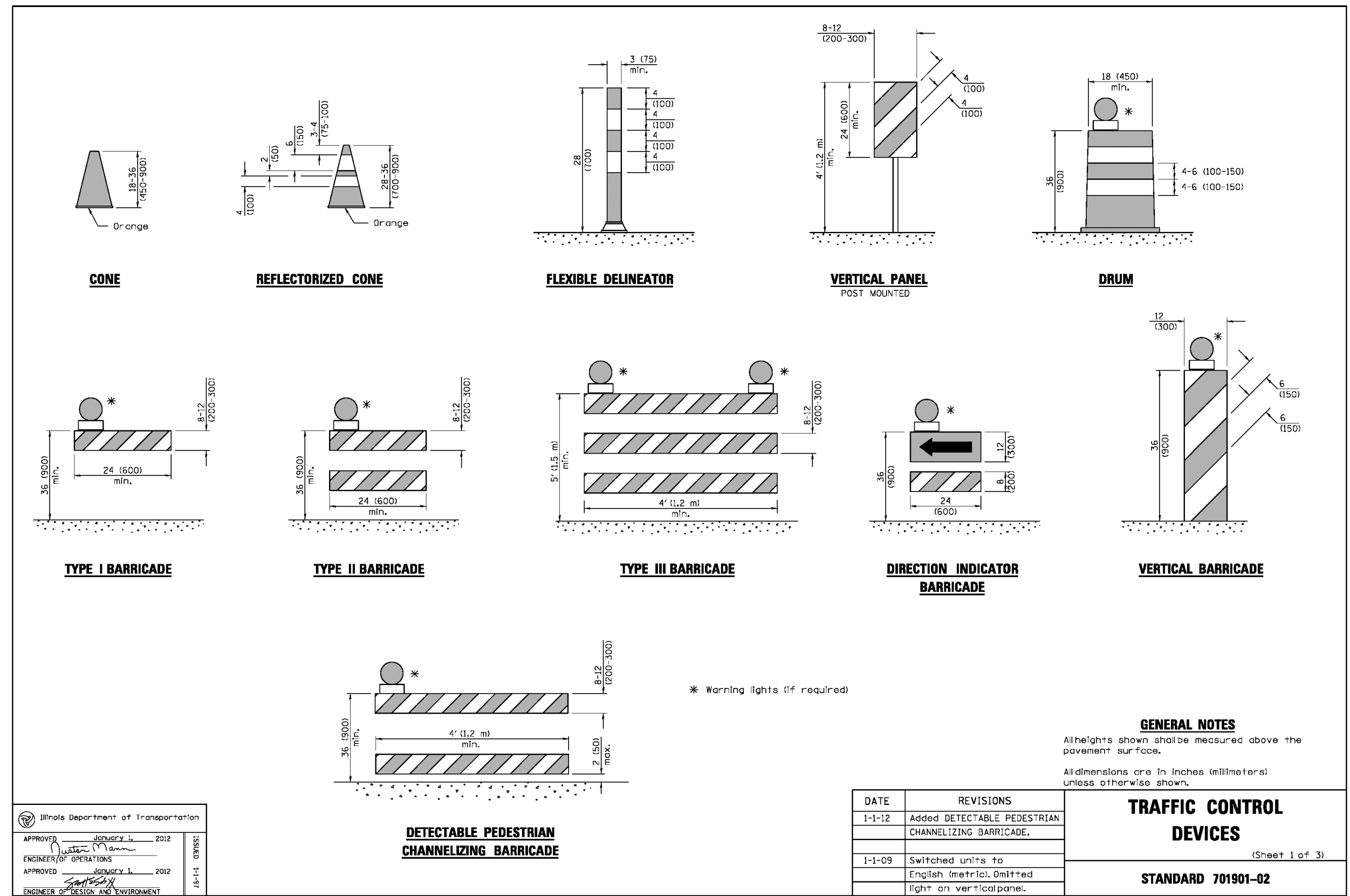
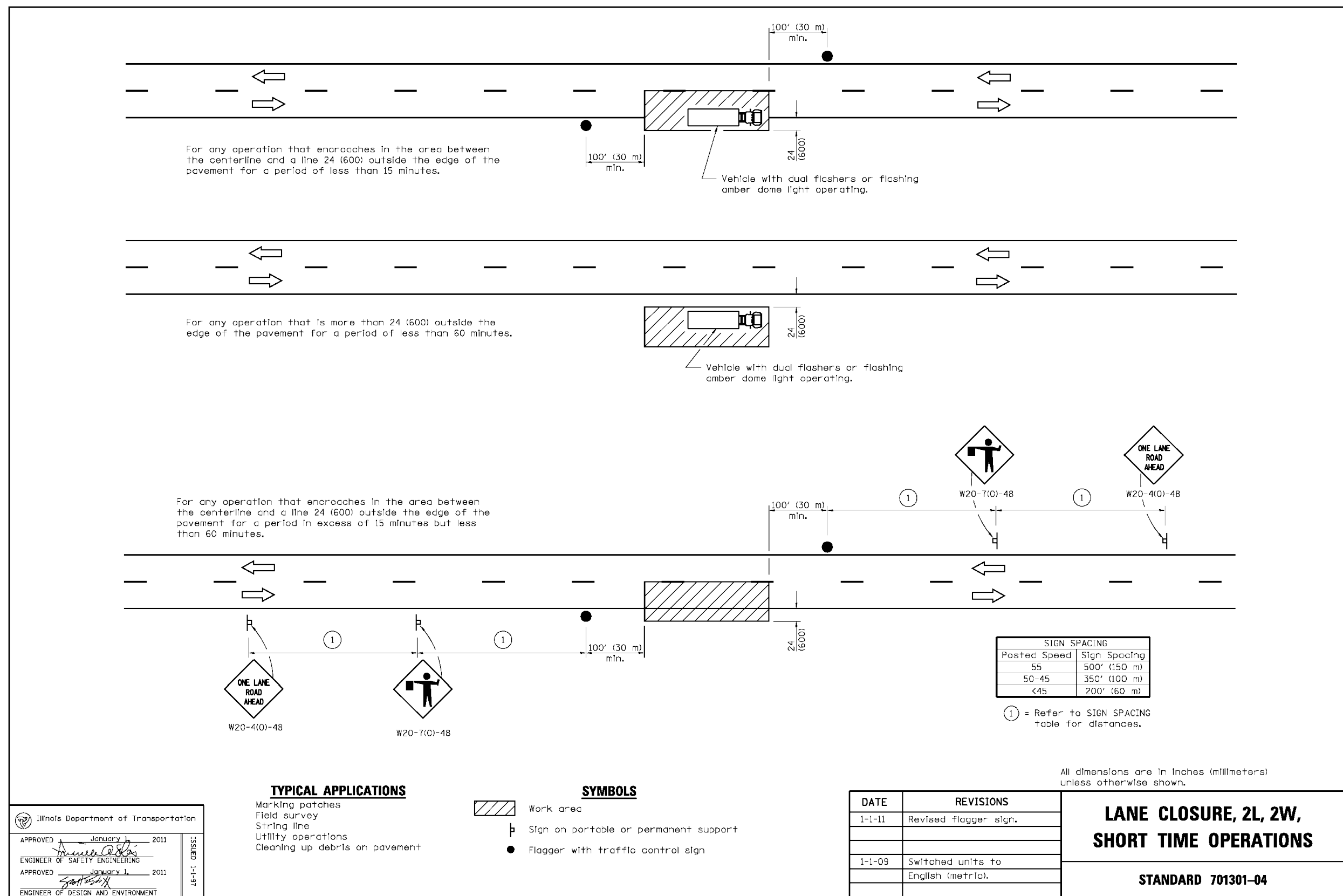
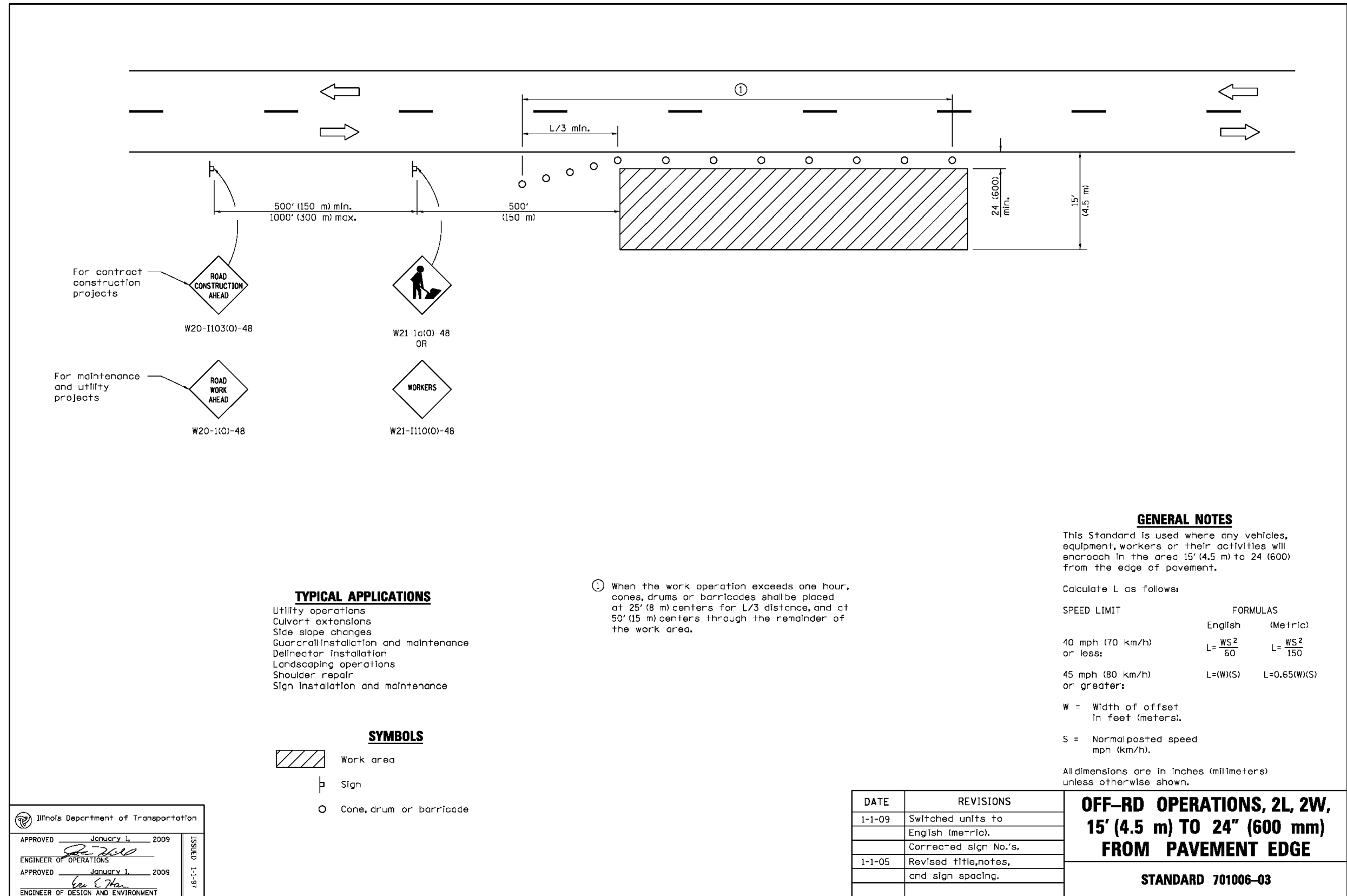
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Xrefs: xgl-1-dn01; IL-605R; IL-541B; IL-541A



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APPROVED: AJ      JOB NUMBER: 86140185.02  
CAD DATE: 7/31/2018 11:10:46 AM  
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KANE COUNTY, IL

DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND ALTERNATE BIDS)  
STANDARD CONSTRUCTION DETAILS

SHEET NO.  
CD-03

FOR BID  
NOT FOR CONSTRUCTION



